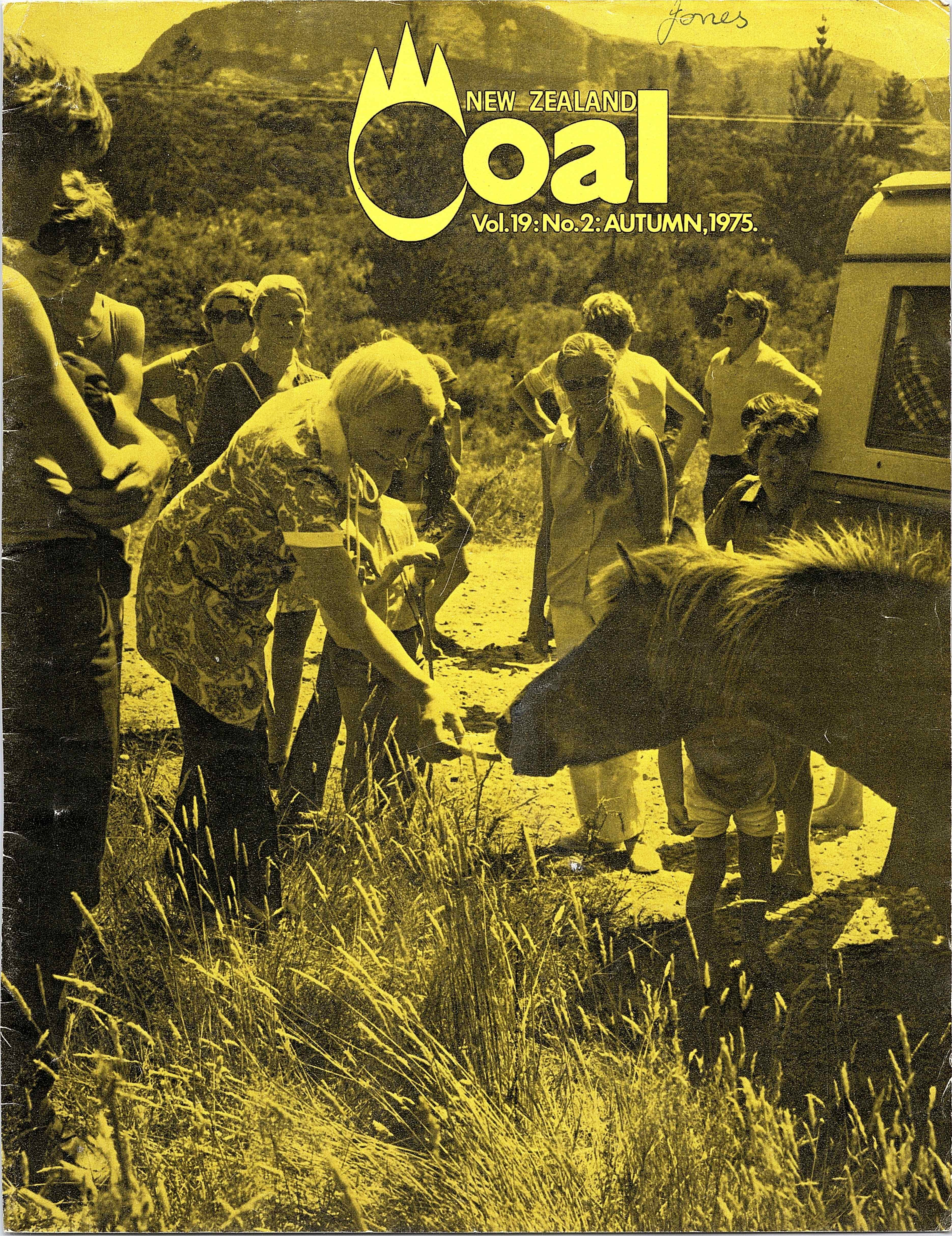
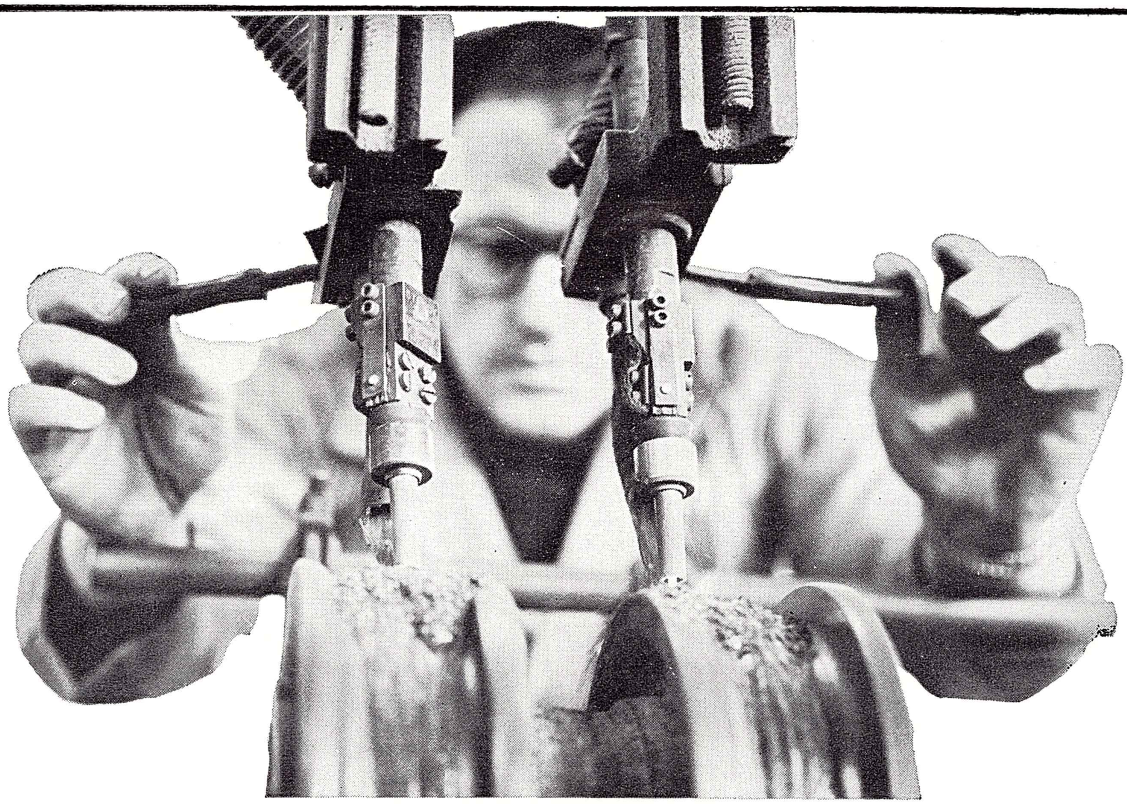
Jones

NEW ZEALAND Coal

Vol. 19: No. 2: AUTUMN, 1975.





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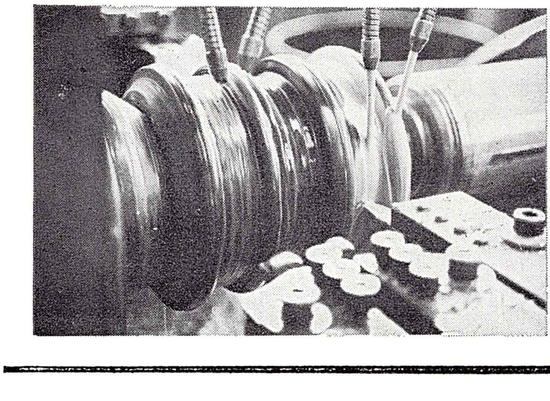

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NEW ZEALAND
COAL

OFFICIAL JOURNAL OF THE N.Z. COAL MINING DISTRICTS' WELFARE & RESEARCH COUNCIL

Registered at the C.P.O., Auckland, for transmission through the post as a magazine.

PUBLISHER & ADVERTISING MANAGER:
J. DIXON
C.P.O. BOX 2990, AUCKLAND.

EDITOR:
B. S. FURBY, MNZEI, MPRI
P.O. BOX 10247, WELLINGTON.

PUBLISHED QUARTERLY

Printed by Cox & Dawes Ltd, 1-5 Millais Street, Ponsonby, Auckland, 2

VOL. 19, No. 2 :: :: :: AUTUMN, 1975

Items appearing in Coal magazine may be freely reproduced in other publications providing that due acknowledgment is given

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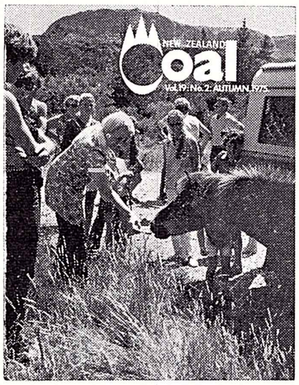
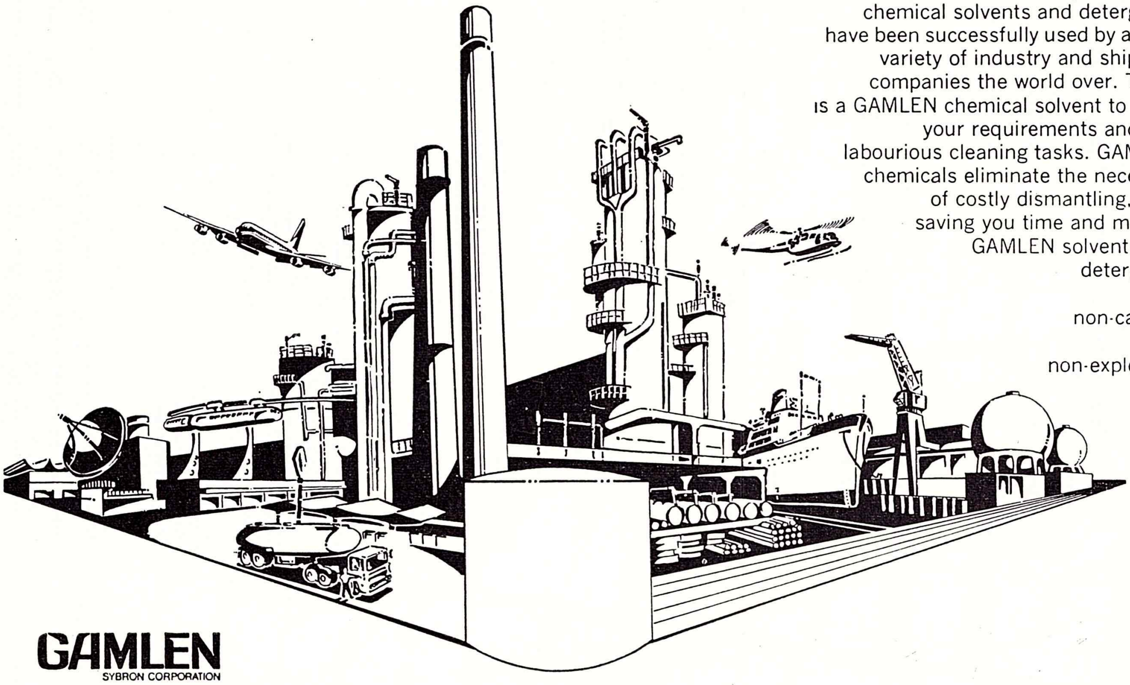


OUR COVER PICTURE

"Teddy", a retired veteran of the coal industry, is not above accepting a few tasty tidbits from tourists on their way for a conducted tour of the Cape Farewell lighthouse, at Collingwood in the Nelson Province. Teddy, at the ripe old age — for a horse — of 37 years once worked in the Puponga Mine, Collingwood, as a pit pony, in the days before the now closed mine switched to hydro mining. He is kept in honourable retirement by his owner, Mr J. Graham of Collingwood.



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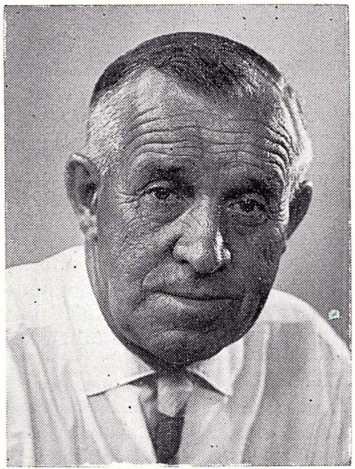
DEATH STRIKES UNDERGROUND

Mr W. Burnett, who with Mr Adam Boote was a survivor of the explosion at Kay's Mine, Runanga on November 6, 1940, in which five men died, wrote his recollections of the disaster in 1955.

Previously unpublished, the manuscript has now been made available to "Coal" by Mr Burnett.


Mr W. Burnett

"It was a lovely spring morning as we mounted the petrol driven trolley which ran on the narrow gauge railway leading to the small co-operative coalmine worked at the head of the gully by a party of men, seven in all," wrote Mr Burnett.

"As we sped along, passing other groups of men engaged in the same occupation at the entrances to other mines there were shouted greetings and much rough badinage directed mainly at Big Jack, the main shareholder of our party. It was known that he intended to go to Christchurch the following week to attend the races, so most warnings were not to back losers, making sure of having a return ticket and not to expect any aid or response to urgent wires for financial assistance.

Arriving at the mine mouth we prepared to go below, adjusting the electric headlamps and having a last minute smoke, while Alec McIntosh set off on his routine inspection of the faces testing for gas and bad roof conditions as required by the Mines Act. Alec was the holder of a mine manager's certificate. While we waited I took stock of the men as it was only my second day on the job and they were all strangers to me.

Big Jack: a tall bigboned muscular man. His son Young Jack, whose task was to drive the winch hauling the coal containers, known as trucks, up the dip from below, showed promise of being the same type as his dad. Adam, Jack's son-in-law, was arranging to work that day with me, a decision which was to affect me more than I could anticipate. A slim, talkative chap called Ted and a sombre looking Italian who was rather subdued as his country was then at war with us and feeling ran rather high in the small community we lived in.

Alec returned to the surface and reported all clear so we set off down the steep dip which we were destined to return under different circumstances. At the bottom Adam and I parted company from the rest turning left while they went to the right along the dark tunnels.

EXPLOSION

Reaching the coal face we started filling the trucks with the coal shot down the previous day; this took about an hour and we decided to bore a hole. Hauling the electric drill into position we started to drill into the face when suddenly the drill cut out and a loud roar sounded outbye, the noise rapidly approaching us. I was hurled to the floor by an invisible force, my first thought was that the roof had collapsed and I twisted my head to look up at it. To my horror I saw blue flames curling lazily along the roof. I realised it was a gas explosion — the dread of all miners who work in fiery mines.

Adam and I scrambled to our feet but quickly went down on our hands and knees as the air near the roof was filled with smoke and soot, but the air near the floor was at least breathable. We started to crawl along to the dip bottom past the flaming brattice, a hessian clothlike material which conveys the air into the working faces. It burned with a dull reddish glow which denoted a lack of oxygen and was consuming more of that precious element.

We both knew we didn't have much time to escape as the aftermath of an explosion is carbon monoxide, the deadly white-damp which kills more than the initial blast.

Adam was in front and suddenly stopped. I crawled up level with him and found he was shaking Big Jack who was recognisable only by his build as his face was blackened by dust. Feeling for the pulse I said: "No use Adam, he is dead, no use trying to wake him up."

Realising the truth of this we crawled on. By this time the smoke and dust were so thick we had difficulty in seeing more than a foot in front of us. Adam said: "We can't go through here." I couldn't see but concluded that the roof had fallen barring our further progress.

"We will try the return airway."

STRANGER

I was a stranger to the layout of the mine so I let Adam take the lead. We stumbled over small falls past broken timber gasping and choking as the air seemed to burn our lungs and throat. We couldn't get a decent full breath of air because of the lack of oxygen.

I bumped into Adam when he stopped: "We've had it mate. There is a big fall in front of us."

A wave of horror swept over me as I heard this, there was such a final discouraged note in his voice. Trapped, I thought, as I was thoroughly lost. For God's sake don't give in let's try somewhere else," I said.

In answer, Adam turned to a small opening and crawled through, I followed. My tongue kept protruding. My throat was parched, my knees were raw with contact of the rough coal floor and I started to fall behind. I tried to speak to Adam but could only croak.

He turned and saw my plight and said: "Hold on to my belt. I'll lead you out." I grasped his belt and stumbled to my feet.

On we went, he still crawling and I staggering alongside him, bent over, all but out on my feet.

Then suddenly he said: "We are on the main dip now, let me go and I'll start the fan and get some air in the place."

We were both coughing and gasping and speech was difficult so I nodded and let him go.

I went down on my knees and hands and resumed my painful crawling, desperately conscious only of the gleaming rail beneath and the need to reach the surface soon.

Oddly, I seemed to be in bed resting comfortably but I could hear someone snoring heavily. Irritably, I tried to wake my wife to get her to stop the noise, I seemed to be having a nightmare and couldn't wake up and was frightened to go to sleep again in case it started all over again. My eyelids were heavy. My arms and legs wouldn't respond, finally with an immense effort I swung an arm to push my wife to waken her and a sharp pain jolted me to consciousness as my knuckles made contact with the rough coal sides of the drive.

SNORING

I opened my eyes to see the roof over me. I was lying on my back and it was I who was making the snoring noise. I rolled over slowly and looked

(Opposite): Scene outside Kay and Party's Mine after the disaster on November 6, 1940.
(This photograph was one of several displayed on the wall of the Mines Rescue Station, Dobson. "Coal" has been unable to trace its origin.)

up the dip. I saw daylight in the opening ahead. The smoke had cleared and the air was flowing past me. I thought: "Good, Adam has started the fan."

Once more I resumed my crawling but this time I felt no pain. I was dull and numb with no feeling in my body.

How long I took I don't know, time was meaningless. I was aware only that I had reached the top when the floor leveled out and I hauled myself upright clinging to the timber at the side of the road.

Slowly, carefully, I put one foot forward then the other. I walked to the mine exit.

Puzzled, I stood and looked.

There was no winch house or crib cabin. Just the flooring remained with the winch sitting looking somehow indecent in the stark light of day without the surrounding walls.

There was no sign of Young Jack. I was to learn later that he was caught by the blast from the mine mouth and hurled across the gully to be brutally smashed against a tree stump, killing him instantly.

Then I was suddenly held in someone's arms and a bottle of cold tea held to my mouth. Never did a drink taste sweeter.

As I gazed stupidly at the men round me I recognised them as the groups we had passed in the morning. I was assailed with questions: "Where were the others?"

I gasped out what I knew, saying that Adam went to start the fan but a quick look showed no-one there. Indeed there was no fan or fanhouse. It, too, had been blown away by the force of the explosion.

One of the men went to the entrance and called out and in a flurry of excitement said he could hear someone reply. He went into the mine and two more followed him — a brave thing to do — as no one knew if there would be a secondary explosion, as sometimes happens.

To my hazy surprise they returned carrying Adam. I had apparently passed him without seeing him as he lay at the side of the road.

GENTLE

Gentle hands laid me on a stretcher and covered me with an odd assortment of clothing. The local doctor seemed to appear from nowhere to look me over for injuries and to ease my breathing which was exceedingly painful. I seemed to have a tight iron band around my chest and every breath was agony. Adam was even in a worse plight than I was.

We were hurried to the district hospital where we were undressed and washed and put to bed. I was resting easier when to my distress, without warning, I was sick over the white blankets, a black inky fluid, it was the dust and soot I had swallowed in my efforts to breath. The nurses assured me it didn't matter in the least and I was better to get rid of it.

I received evasive replies when I asked about the others and it dawned on me that Adam and I were the only survivors. That's when it really hurt, but the worst was to come when I was discharged a week later. I found I was afraid to go into a dark room and more afraid to go to sleep as when I started to doze off the whole thing would start again. I didn't realise I was on the verge of a nervous breakdown and only the patient understanding of my wife and the help of friends kept me sane. I made silly mistakes and did some stupid things, firmly convinced they were the logical things to do. I must have been a trial to all concerned.

There was of course an inquiry into the cause where it was established that there was a sudden accummulation of gas and one of the victims had lit a forbidden cigarette with disastrous results. The Italian and Alec had endeavoured to help Ted and in doing so had fallen victim to the deadly whitedamp.

It all happened a long time ago but I never see a news item of a mine disaster without a shudder as I recall only too well the struggle I had to reach the open air.

☆ ☆ ☆

Mr Burnett has summarised his lifetime in the coal industry for "Coal":

I started in the coal industry in 1926, aged 16½, in the Reefton district at the Konini mine owned by Redpath of Christchurch. It was managed by Bill Louden, who was overcome by blackdamp while trying to rescue a miner who was also a victim of damp in a mine in the Millerton area.

In those days of boom and bust, work in the winter, idle in the summer, I worked in various mines — Burke's Creek under Wullie Woods and later under Bill ("Spare me Days") Parsonage, also small privately owned mines and co-operatives, Perfection Valley, Archers of Capleston, where the seam was vertical, the floor and roof were the ribs.

Dad and I tried the private mine caper too, on the edge of Reefton, later Hamills mine, but with no great measure of success. We couldn't sell the coal. The depression years saw me try all sorts: the 5b scheme*, gold subsidy, bushwork, public works and then I got married. As Reefton's fogs didn't agree with my wife's health I moved to Greymouth in 1939. Started in Rewanui as shiftman on backshift but didn't last long as that trip up the Incline and across the Viaduct in the pouring rain was too much.

Started as miner in Moore and Party in Cliffside. Then I went to Kay's mine on November 5, 1940. It blew up the next day at 9.00 a.m., so I didn't last long there.

The first man I saw when I staggered out was Bill Parsonage, who was Inspector of Mines in the Grey District. He played a leading part in the rescue of Adam Boote, who was several chains down the dip.

When I recovered from the shock about one month later I started in Strongman mine, managed by Percy Outhwaite†, trucking. Those 15 cwt boxes nearly killed me. Wanting to get on the coal I went to Wallsend mine under Frank (Lockie) Lockington, for five and a half years. When I grizzled about the Wet Coast a Waikato miner told me of the glorious Waikato sunshine so I emigrated to Huntly. I started in the MacDonald Mine under Hughie Stirling and later Jim Mitchell. The superintendent was "Spare Me Days" Parsonage — our paths seemed to cross a lot.

I worked as miner, shiftman, seagull deputy, deputy and later full-time deputy for 25 years. I also served on various committees as president or secretary, such as the Huntly and Renown Districts' Medical Society (19 years), MacDonald Sick Benefit (18 years) and C.M.D.W. and R Fund, also the P.T.A.

When the "Mac" was prematurely closed I was met by the cry "You are too old at over 60". So I was reluctantly forced on the pension. So I now potter round the garden, play bowls and I'm honorary secretary for the Huntly West Bowling Club. As I'm reasonably fit and healthy I take odd jobs to supplement the pension and generally enjoy life, but I like most of all to go to the club on Saturdays. At the pensioners' table, flanked by Jack Shaw, Fred Dellaway††, the Tait Bros, and others, I talk over old times — split pillars — take out stumps — shoot tops — and fill prodigious amounts of coal.

No need for a Continuous Miner when we were in our prime. I have a recorded 37 years in the industry and don't regret the years I spent underground.

Yours faithfully,
W. A. Burnett (aged 65)

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* A scheme where local bodies were subsidised to provide some work for the unemployed.

† Later Under-Secretary of Mines.

†† See photographs page 11 in the previous issue of "Coal".

The Good Old Days

When coal partnered steam to pioneer the revolution in sea transport

By the Editor

Evolution can often be a painful process. The modern marine engineer, comfortable in his stateroom-cabin, has his head full of hydraulic and electronic control theory for his modern high-pressure steam turbines. Does he ever think about the trials of his pioneer predecessors, when coal partnered steam in making shipping independent of the capricious wind?

The modern engineer worries about his turbine vacuum; the pioneers struggled with crude reciprocating engines which were little more than vacuum engines themselves.

Captain John Ross, R.N. (later Rear Admiral Sir John Ross) was a pioneer in more ways than one. As well as attaining fame for exploring the Arctic, the Captain could visualise the advantages of steam. His ship, the Victory, sailed in search of the North West Passage (between the Atlantic to the Pacific, by sea around Canada and Alaska) in 1829, fitted with a steam engine.

The deficiencies of this early marine engine became apparent almost as soon as England was left behind, and Captain Ross's diary of the voyage is an almost daily chronicle of engine breakdowns.

His engineers must have been kept busy: everything, it seemed, broke, wore, leaked, flooded or otherwise gave trouble.

Nor was the rest of the "black gang" spared. The boilers, working at the then high pressure of 45lbs, leaked to an extent that the hand feed pump had to be manned in addition to the mechanical feed pump. The makers' recommendations for treating a leaky boiler — to shovel cow dung and potatoes into the boilers — were ineffective.

Even when the whole works were in going order, they could propel Victory at little more than three knots.

Not surprisingly, after a voyage which was a continuous story of engine and boiler breakdowns, Captain Ross gave the order — when preparing to winter in the far Canadian north: "Remove engines ashore".

"Totting up, there are 700 bushels of coke and coal aboard, sufficient for 700 days," says the captain's log.

Thus probably the only gain from steam in that voyage was the surplus coal to keep the crew warm until rescued in 1833.

Not Unique

Captain Ross's experience of steam was not unique in that period of marine engineering. Those early steamships were built as sailers, with an empty space amidships where the engine builders put their engines. Poking above the deck was the crankshaft which turned the paddles.

The upper part of the engines was well illuminated by natural light. The lower part was in almost eternal gloom, economy allowing only one hurricane light.

The watchkeeper did his rounds with a duck lamp for light. This was a sort of coffeepot full of colza oil, and a wick protruding out from the spout. By its smokey, reddish glow the "black gang" did their work, hand-oiling bearings amid a maze of rotating shafts. Guardrails were far in the future: the "gratings" were slippery planks, where it was easy to slide on a patch of oil in those pre-stabiliser times.

In the first generation steamships the engines were bedded to the wooden hull discretely, and the working of a wooden hull in a lively sea meant that seemingly solid parts of engine were moving in several directions independently.

Darkness

Conditions for the watchkeepers have to be imagined. Gas, kerosene and now electric lighting have been so taken for granted that the darkness in an early steamship's engineroom and stokehold would seem unbelievable. No doubt the pioneer marine engineers developed keen hearing and a sense of feel to compensate for the loss of vision.

Once the boilers and engine were installed, no real light might ever fall on them again until the ship was wrecked or broken up.

In those conditions it was almost impossible to inspect engines and boilers thoroughly, to be able to see incipient weaknesses before something ground to a halt with expensive noises.

Possibly this lack of inspection contributed to the end of the Cricket, built in 1846 for passenger traffic on the Thames. With HP and LP cylinders oscillating side by side on common trunnions, this was one of the earliest examples of compounding. Not only was the Cricket a fast boat, but she was also an economical one for her time, making 14 knots on 4½lb coal/IHP/hour when good average practice could not reduce the coal below 5lb. Her two boilers could never be kept steamtight, at a working pressure of 20lb.

Failed

In late 1847, with 150 passengers aboard, a main longitudinal stay in the starboard boiler failed. The endplate blew and the force of the escaping steam shot the boiler through the after part of the vessel and the main cabin, killing 17 and injuring 60.

The resulting inquiry came to a common conclusion for those days before safety valves could not be tampered with: that the safety valves were overloaded.

The power of steam, even at 20lb, could be seen to be lethal. That there were not more disasters at that time of evolution was probably because lower pressures — down to 6lb — were common.

Heroic

" — The auld Fleet Engineer
That started as a boiler-whelp — when he and steam were low.
I mind the time we used to serve a broken pipe wi' tow!
Ten pound was all the pressure then — Eh! Eh! — a man wad drive . . . ."

Kipling immortalised some of the heroic age of marine steam in "McAndrew's Hymn". Within a man's working lifetime, the unbelievably crude engines of the first steamships grew into the huge, powerful reciprocating monsters that powered the late Victorian liners over miles of ocean.

That same achievement carried the seeds of its own demise, because the steam reciprocating engine presented a ready-made technology for the internal combustion engine, its valving, bearing technology, crankshaft forging techniques, lubrication and metallurgy having been evolved through steam.

Not the least hazard in early steamers was the lubrication system. Tallow was the only lubricant, before mineral or even vegetable oils became available.

Priming

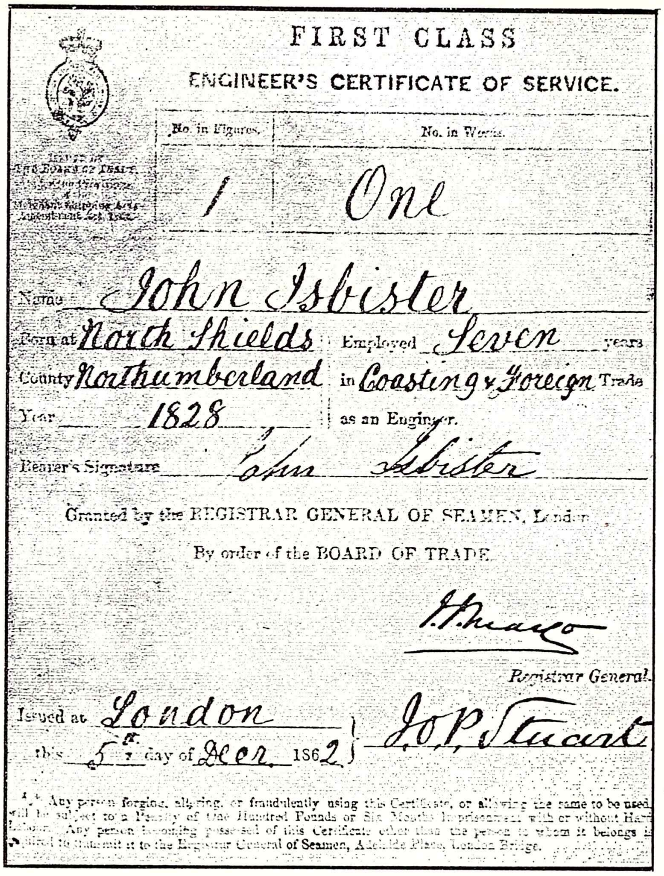
All the grease in the heavy, slow-moving pistons and valves eventually found its way into the condenser and entered the boiler. This greasy, frothy mass lying on water of high salinity formed ideal conditions for priming — the whole mass would boil over and fill the steaming space with froth and water in suspension. (Compare boiling saucepans of water, and of milk, on a stove. The milk boils over; the water quietly boils away.)

Early engineers used to put oatmeal and potatoes in their boilers to prevent leaks, and to coat the insides of the boilers with graphite and tallow — further causes of priming.

The early practice of using feed-water straight from the sea usually caked the boiler tubes with salt, requiring frequent descaling by the engineers.

Water hammer could shatter cast-iron valves and steampipe bends. Expansion joints were merely pipes lead into a junction piece through a stuffing box. There was nothing to

(concluded on page 9)



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Year 1828 | as an Engineer.

Bearer's Signature John Isbister

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Preserved in a museum in New Zealand's Northland is a link with the pioneer days of marine engineering. The first first-class marine engineer's ticket issued by the British Board of Trade is preserved at the Otamatea Kauri and Pioneer Museum at Paparoa, between Dargaville and Maungaturoto.

Certificate No. 1 was issued to John Isbister who also qualifies as an early European pioneer in New Zealand. He was born in the Orkney Islands in 1828, and married Ann Moor of West Hartlepool in 1845.

Being in the heart of a shipping area it seems natural that Isbister should have looked to the sea for work. He studied mechanical engineering and became a steamboat man for the East India Company — the famous "John Company", a limited liability company that ruled the Indian Empire until the Mutiny of 1857.

A collection of cutlasses and pistols later decorated his New Zealand home as a souvenir of his times trading to the East.

When in 1862 the British Board of Trade instituted compulsory examinations for marine engineers, Isbister sat and passed the examination and was issued with certificate no. 1. After receiving the certificate he migrated to New Zealand, sailing with his family — later to total nine children — in 1862 in the ship 'Clairmont".

Four and a half months it took the Isbisters to reach Auckland, and a further six weeks in the city before the family could hire a cutter at Onehunga to transport them and their goods to Kaipara and Matakohe where they had obtained a grant of land. The trip north itself occupied a further three weeks, and the Isbisters eventually arrived in early 1863.

The cases their household goods were packed in were used as temporary walls, roofed with large carpets overhead. Fortunately, it did not rain for seven weeks and the family was able to hire local Maoris to build a whare.

Later, a permanent home was built on the main road and featured a large, properly-rigged flagstaff in the grounds out front. Isbister used it for hoisting flags to celebrate public anniversaries and other events. In 1950 the flagstaff was donated to the Matakohe Cemetery Committee and part of it now marks the old site of the local pioneer church hall.

Despite digging over five acres by hand, John Isbister found the first few years difficult in winning a living. So he returned to sea again, as engineer in the Government steamer Hinemoa.

His finances recouped, he returned to Matakohe and set up business as storekeeper, blacksmith and butcher. First aid and surgery were among his accomplishments and he included these among his services, because there were many times when the district had no resident medical practitioner. Frequently, Isbister was called to attend severe accident cases among the bushworkers.

As well as being expert in setting limbs and stitching wounds he could pull teeth and during a smallpox scare in 1900 he vaccinated practically the whole community.

John Isbister was a member of the first school committee in the district; he was largely instrumental in collecting funds for a settlers' church for the use of all Protestant denominations in the area; and was an early representative for the district. When the Otamatea County Council was formed he was County Chairman for 10 consecutive terms.

John Isbister: pioneer marine engineer, pioneer settler in New Zealand, a man endowed with great all-round ability and a sense of community service died in 1901 and was burried in the Matakohe lawn cemetery in the district he helped to found.

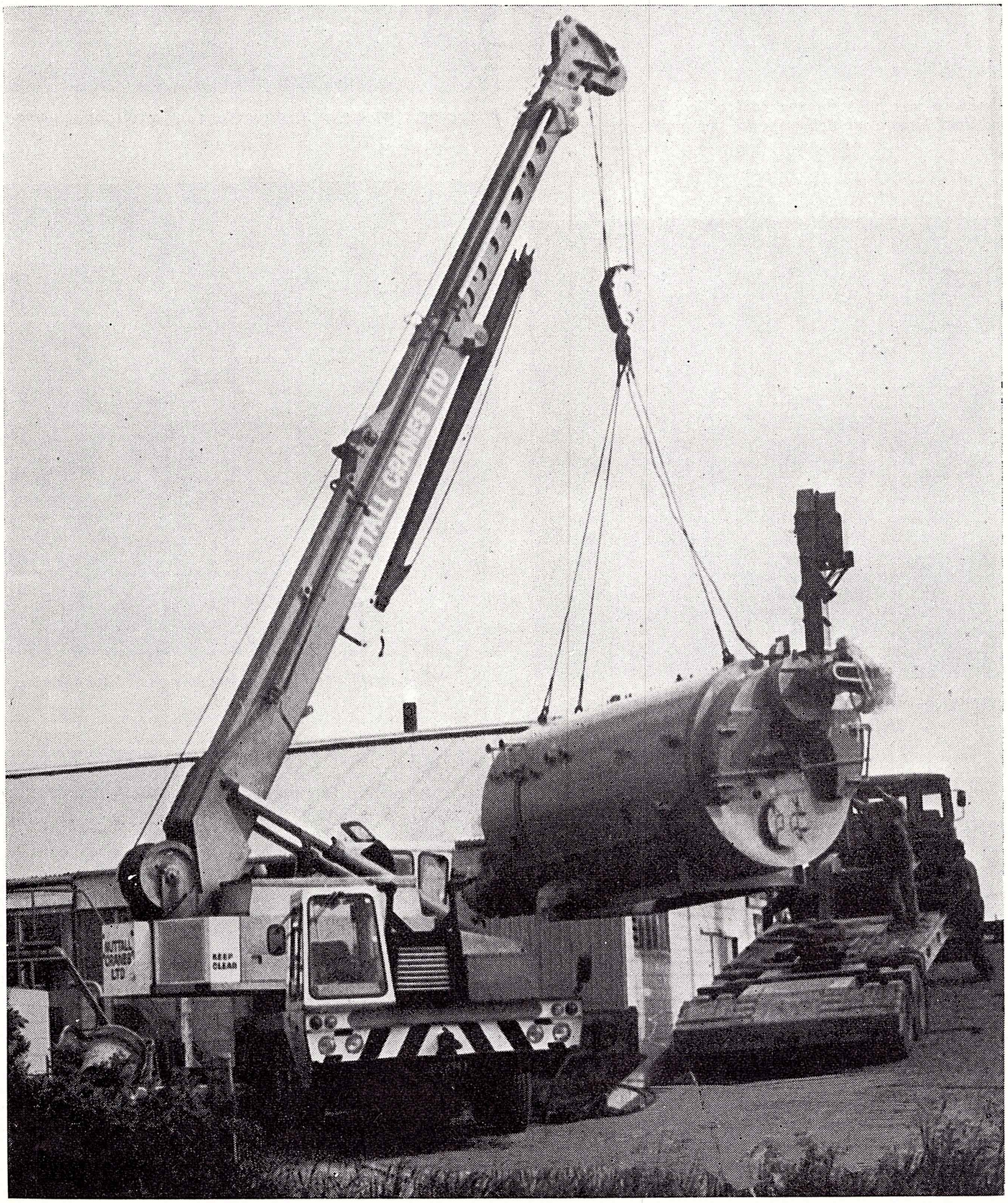
His marine certificate, preserved in a remote country museum in New Zealand provides a link with early British marine engineering.

COAL PREVENTS POLLUTION

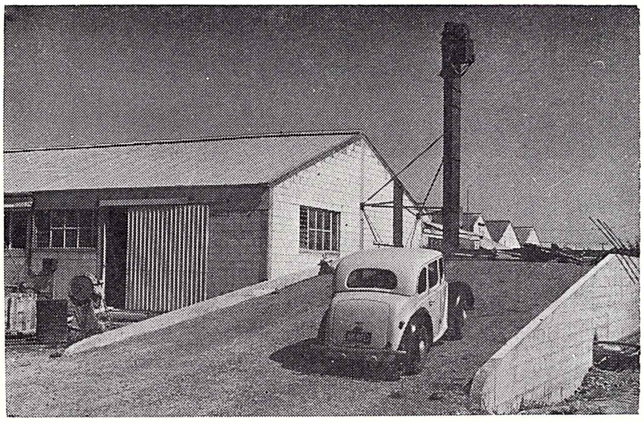
—and halves fuel costs

Felling, we found out at North Canterbury Wool and Fellmongery Ltd at Kaiapoi, is to remove wool from the sheepskin. The pelt, without wool, and pickled for preservation, is in good demand for such purposes as the inner linings of shoes, clothing suedes and chamois leathers.

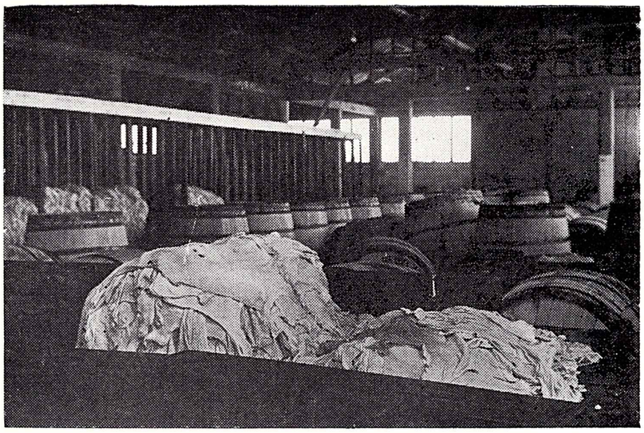
(continued on page 8)



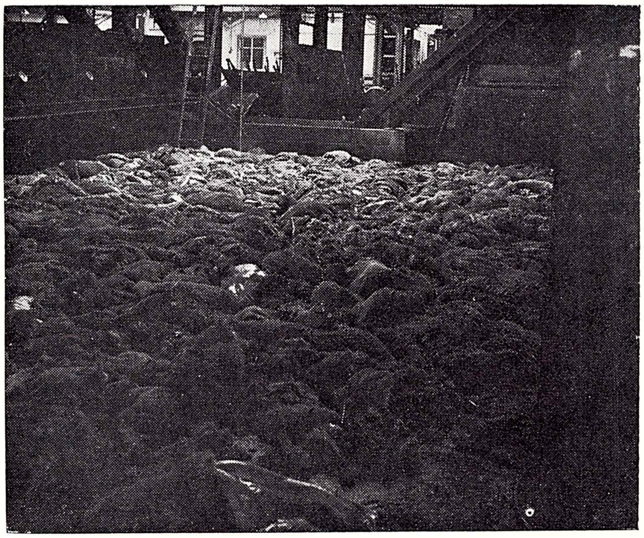
The North Canterbury Wool and Fellmongery Ltd's new coal-fired B. and W. boiler arrives on site. About 10 tons weekly of Alpine blended with another coal will be used.



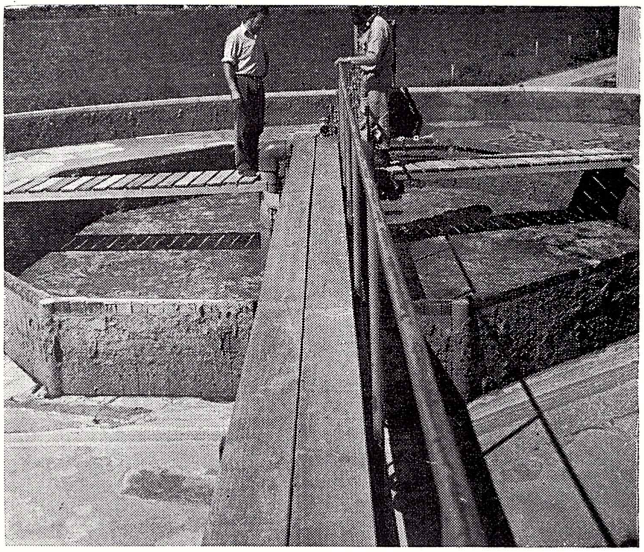
A new boilerhouse was built for the coal boiler. The ramp in the foreground facilitates coal deliveries to the bunker by trucks.



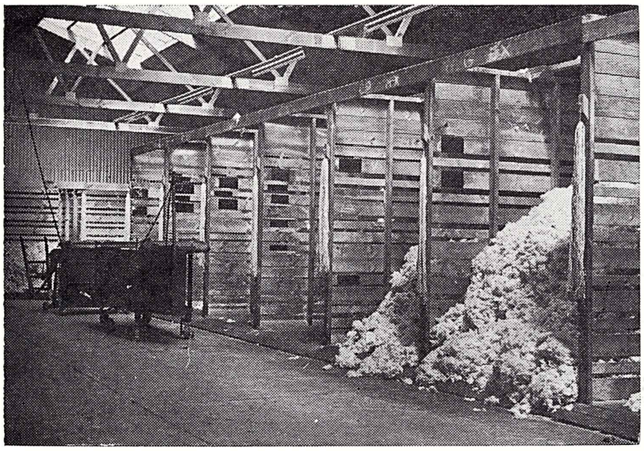
Processing complete, pelts are packed in barrels for shipping to users.



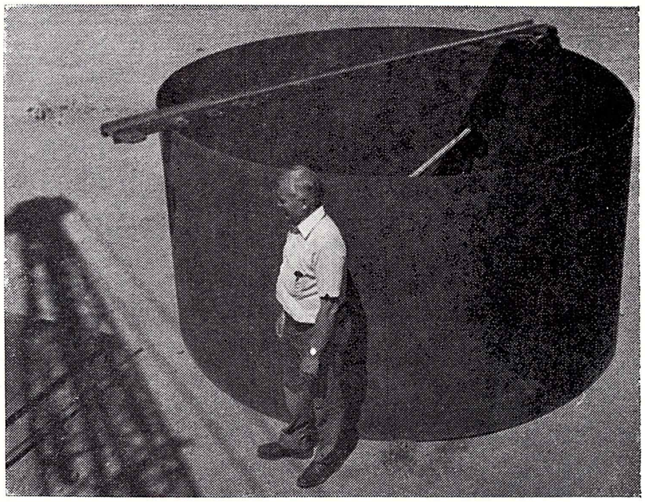
Between 400,000 and 450,000 pelts are processed at the Kaiapoi fellmongery each year.



The settling tank where water is passed for filtering.



Wool recovered from pelts.



Not completed at the time of "Coal's" visit to the Kaiapoi fellmongery, the coal filter was being built by an engineering firm in nearby Amberley.

COAL PREVENTS POLLUTION

(concluded from page 7)

Coal's connection with the Kaiapoi fellmongery is more than as a cost-saving fuel. The pilot system was described by Mr J. E. Cranko, consulting engineer of Christchurch in "Coal", November 1972. The effluent from the fellmongery, after passing through a settling pond, is filtered through coal. The coal in the filter is mixed with fresh coal and fired under a boiler to obtain heat for the factory processes.

From the pilot plant a fullscale system has been developed, and will use coal for filtration, thus preventing pollution in adjacent rivers and streams, and producing coal-fired heat.

The new boiler is a 6,500 lbs per hour Babcock and Wilcox built by W. B. Easton Ltd of Dannevirke, using an Oldbury chain grate stoker. Bunker capacity is 12 to 15 square yards, and has an inclined ramp for tip trucks to deliver the coal.

The stack is of stainless steel, 30 feet high.

The new boiler has plenty of capacity for present steam demand, but the new boilerhouse has room for another boiler. The steam runs the wool drier and a calorifier for hot water.

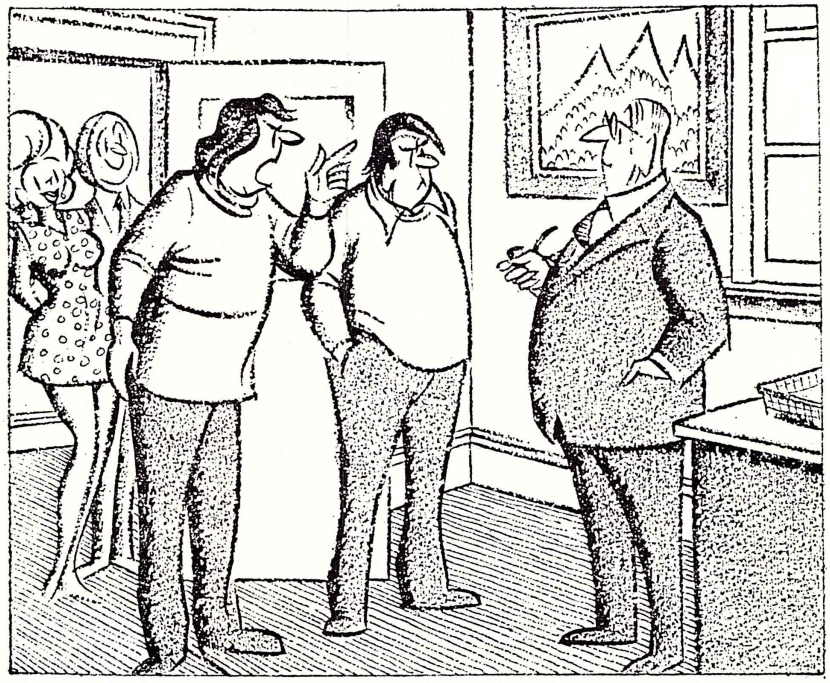
The fellmongery services the domestic meat trade and abattoirs by receiving pelts from carcases. The slipe wool from the pelts is neither greasy nor scoured, and is for carpets and most woollen goods.

The present fellmongery was established in 1954 on the site of a previous fellmongery, and is one of the largest in New Zealand. It provides employment for up to 40 men, who mainly live in Kaiapoi.

Approximately 200,000 gallons of water are drawn from the Kaiapoi River daily, used for washing and general processing. Sodium sulphide is used in the depilatory process to loosen the wool in the follicle.

Studies began a long time ago to find ways of removing the contaminant from the water used in the process, as the fellmongery management was always conscious of the pollution problem, and the 1970 Water Conservation Act provided the stimulus for intensifying the search for an answer to the problem.

As the first fellmongery to convert to coal, the company finds an advantage in solving its pollution problems by using coal as a filter: fuel costs have been halved by the change to coal.



SLACK STORY

The wisdom of Solomon can be found in some unlikely places.

It was revealed a while ago in a State coal mine; where the normal procedure is that the production workers, the actual miners who hew and shovel the coal are on contract. They are paid an agreed sum for each ton of coal produced. Coal of course, is not deemed to be wood, stone, or any other other miscellaneous material.

The supervisor of the screening plant advised the mine manager that considerable numbers of large pieces of stone had been intercepted by the employee who sat beside the screening conveyor to remove such foreign material.

A little detective work established that the stone was coming from trucks filled by a certain pair of miners. The manager warned them that they must not use stone to make up the weight of their output. They protested innocence and claimed that only small pieces scooped up among the coal on their shovels could be involved.

There appeared to be no improvement in the situation, so the manager went one day to the weighbridge where the little trucks of coal were weighed as they emerged from the mine.

A group of trucks bearing the number of the suspects arrived, and as they ran over the weighbridge, registered well over a hundredweight above average. The boss diverted these trucks to a siding rack, and there they stayed for a while. A week or so later the pair of shovellers placed their orders for a load of domestic coal each. The moment of truth had arrived, the little waggons of coal were dumped into a motor lorry for delivery, in the process displaying a large number of substantial stones. The load was dumped at the homes of the producers.

Next morning the pair confronted the manager complaining strongly about the load of muck delivered to their homes.

To their own discomfort, but to the vast amusement of all others present, they were told where it came from, and what would happen if their practices did not cease.

— Reprinted from the Christchurch "Press", November 9, 1973.

THE GOOD OLD DAYS

(continued from page 6)

stop the pipe end blowing out, other than the stiffness of the pipe, until the practice arose of putting a flange on the pipe.

Corroded

HMS Thunderer, built in 1872 with the last square boilers in Royal Naval service, killed 15 men when a boiler frontplate failed because of excessive pressure. Rated for 39lb, the safety valves had corroded in their seats.

In the dim lights of oil lamps, such incipient dangers stood very little chance of discovery during routine inspections.

"Light on the engine-room — no
more — bright as our carbons
burn.
I've lost it since a thousand times,
but never past return!"

McAndrew is a breed of marine engineer now disappeared forever from the sea.

So, also, have passed the days when coal was used in conditions of discomfort and hazard which will never return.

NZ GEOLOGICAL SURVEY AND COALFIELD EXPLORATION

by S. N. Beatus, N.Z. Geological Survey, Lower Hutt

The connection between the N.Z. Geological Survey and the search for coal goes well back into the last century. Coal was obviously going to be of great importance to the new and growing colony and this was recognised by the provincial leaders of the time. When the New Zealand Government moved from Auckland to Wellington in 1865 James Hector then provincial geologist in Otago, was invited to form a national geological survey and this was set up together with the colonial museum in March, 1865.

The first "Report of Geological Explorations" was published in 1866 entitled "General Report of the Coal Deposits of New Zealand".

The early geological survey placed great emphasis on economic minerals. Coal, gold and other metals were reported on frequently in the "Report of Geological Explorations", which continued to be the method of publishing survey results.

From the early beginnings the work continued steadily with more intensive detailed coalfield surveying during World War I. It was during this early part of the 1900s that the source area of most of New Zealand's high grade coals was mapped in detail. Geological structure was worked out and quantities assessed. The results appeared in two geological survey bulletins; "Geology of Greymouth Subdivision, North Westland," P. G. Morgan and "Geology of Buller Mokihinui Subdivision", P. G. Morgan, J. A. Bartrum.

In the mid thirties the policy of promoting secondary industry led to an increasing demand for coal. A national coal survey was set up in 1936. This was a comprehensive project to examine the country's coal resources with regard to quantity and quality. The work took many years to complete and assumed urgency during the war and in the years following.

Coalfield bulletins were published, covering Greymouth, Reefton, Kaitangata and Ohai.

At present the geological survey drawing on over a century of accumulated data, is compiling an addition to its well known Report 38, "Minerals of New Zealand". This will be Part C, "Coal". It will be published later this year.

In the meantime a new project to prove the extent of some known coalfields has begun. The project involves extensive drilling and evaluation of cores to estimate coal quantities beyond the known areas.

The work in Northland has been completed and results are being evaluated. The next area worked will be the Waikato followed by the other North Island fields. In the South Island the project will concentrate on the Central Otago and Southland lignite fields.

There seems no doubt that coal will assume growing importance as a chemical and energy source and the more that is known about the extent of our resources the easier will be the exploitation.

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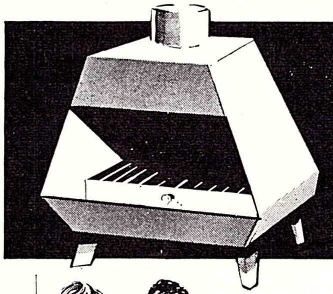

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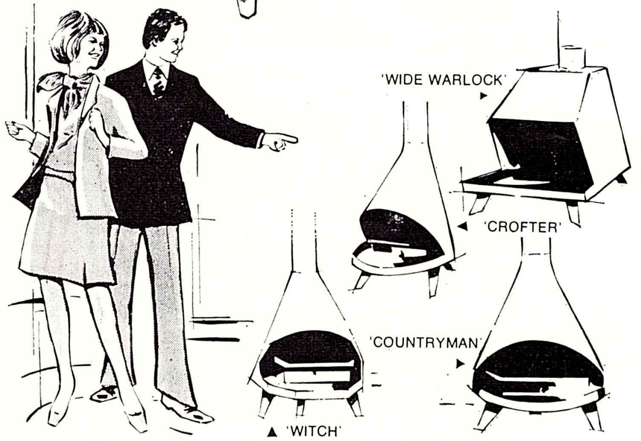

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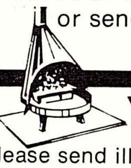

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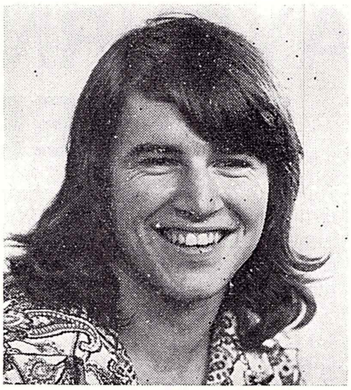
Mr W. Elliott, an underviewer at Ohai and a long-serving member of the coal mining industry.

Mr W. Williams, draughtsman at Dunollie, district office for State Coal in the Grey Valley.



Mr A. R. Garrick, of Huntly, a first year engineering apprentice studying with the NZ Technical Correspondence Institute at Lower Hutt, has been awarded a special prize by the NZ Engineering and Related Trades Industrial Union of Workers. He receives a 0-25mm precision micrometer, a 300mm stainless steel rule and a quality hand hacksaw.

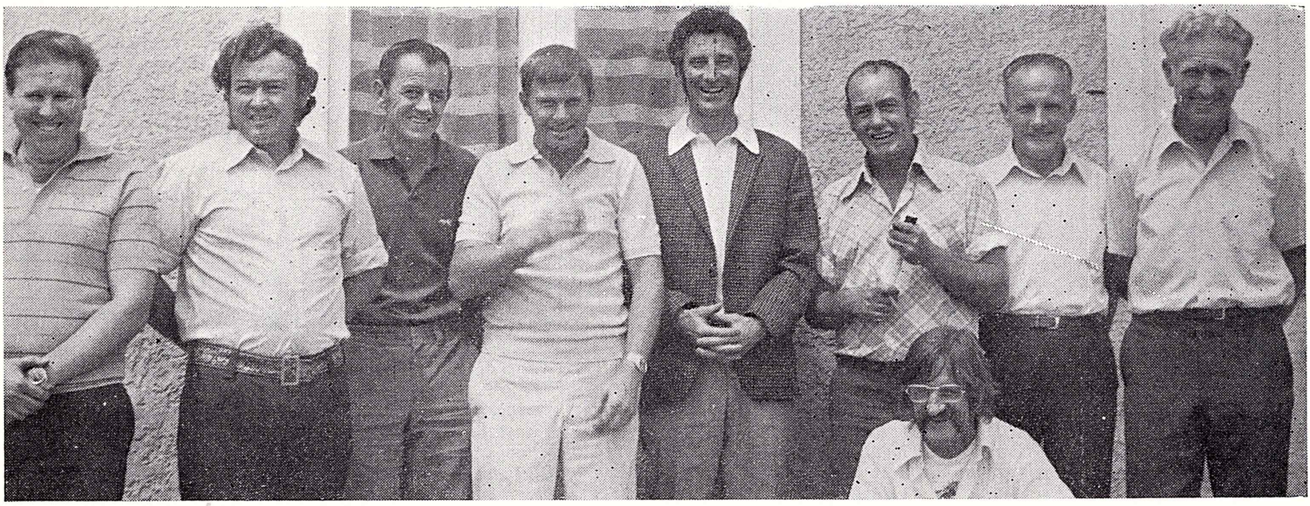
The institute selects each year, on behalf of the union, those students who have made outstanding progress in their correspondence studies.

Employed by the State Coal Mines at Huntly and sitting his first qualifying examination, Mr Garrick was placed second among the 326 apprentices enrolled in fitting and welding with TCI.

(Right): Miss S. Janes, accounts clerk at head office, Wellington, of the Mines Department.

PEOPLE – in the COAL INDUSTRY

(Below): Executive members of the Stockton Miners' Union in a happy mood one bright Buller Sunday morning in December. Left to right (union office and years of mining service bracketed): Messrs C. Teichart (executive member, representative to Trades and Labour; 18 years), A. Willman (vice president; 10 years), A. Straker (deputy check inspector; 31 years), T. Foreman (president, delegate to Buller Mines Central Committee and check inspector; 18 years), C. R. Aldridge (secretary, secretary of Buller Miners' Central Committee, and national councillor for Buller; 20 years), A. Harris (president of union medical association and executive member; 34 years), R. Wilson (secretary of union sick fund and executive member; 37 years), and N. Stack (check inspector and executive member; 30 years), Kneeling: Mr J. Cotter (executive member; 25 years)



FIRST RAYBURN FOR THE BULLER

Public Trust rep in the Buller is Clark Nicolson. When not at work as Westport District Manager for the Public Trust, Clark is at home, keeping warm by burning coal — or soon will be.

"We thought it was silly to have electricity when coal is always available, even during power cuts," says Clark.

The Public Trust has a long standing association wtih the coal industry, through various trusts, and through membership of the Coal Mining Districts' Welfare and Research Council.

Westport's representative of the Public Trust is in favour of coal for more than just historical associations, though.

"We decided on a Rayburn coal-fired domestic heater," he says. "The appearance and the fact that it's pollution free decided us."

Mr and Mrs Nicolson have been living at Carter's Beach, Westport's handy seaside suburb, for some time, and have now engaged in building a new home — still at Carter's Beach.

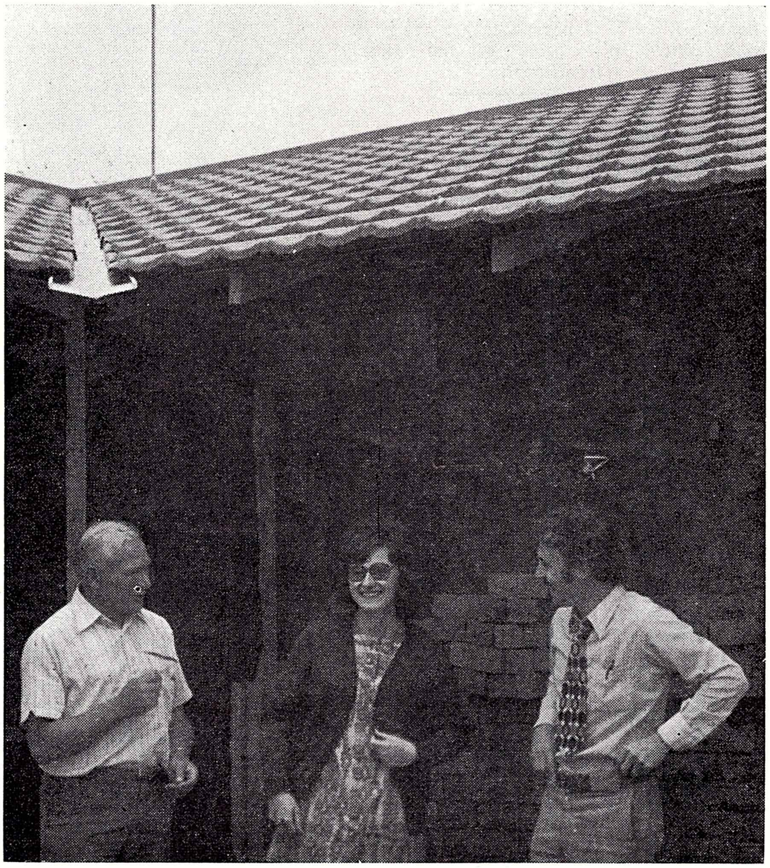
"We're not having radiators," he says, pointing out that Westport's climate — particularly at Carter's Beach — is nowhere near as cold as Christchurch.

The Rayburn will be coupled to the Nicolson's hot water cistern.

Because the Rayburn is designed for bituminous coal, it is ideal for the Buller where so much bituminous coal is mined.

This one for the Nicolson's new home will be the first in Westport or the Buller.

It is being mounted on an inside wall, in the lounge, so that heat will be radiated through the house, instead of some being dissipated if the heater were on an outside wall.



Mr and Mrs C. Nicolson outside their new home at Carter's Beach, Westport, discussing the Rayburn 101 Princess model coal-fired heater they plan to install with Mr A. Henry (left), a fuel technologist of the Coal Research Association at Christchurch. The brick sheathing is of coal-fired bricks from a kiln at Darfield, Canterbury.

RETIREMENT

"Please express my gratitude to Glen Afton Collieries and my pride in having been able to represent them during the past 30 years,' Mr Stirling says.

"I also want to extend my thanks to all of the many people I have worked with during the past 50 years.'

Nearly 50 years of coal mining were completed by Mr H. M. Stirling when he retired last year as Superintendent of Mines for Glen Afton Collieries.

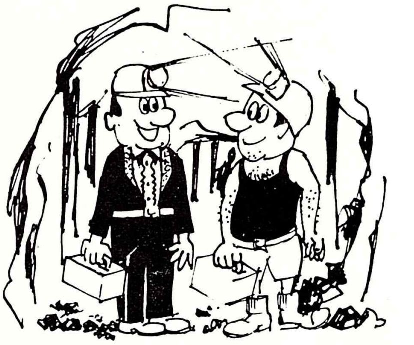
Mr Stirling was 16 when his coal miner father brought his wife, three sons and one daughter to New Zealand in 1925.

In those times when jobs were not easy to find, Mr Stirling became a miner because there was little else offering in Huntly.

The depression years were not happy ones for Mr Stirling, but better times were coming and he considers it a particularly fortunate step when he joined Glen Afton 30 years ago. For 14 years he managed the MacDonald Mine, and for the last 16 years he was superintendent.

Mr Stirling served on the Board of Examiners for nine years and has been a member of the Coal Mining Districts' Welfare and Research Council since 1969. He played soccer for 10 years in his youth, and along with bowls now has a variety of interests.

☆ ☆ ☆



"I'VE GOT TO RUSH TO A WEDDING RIGHT AFTER WORK"

DENNISTON

After the exciting spiral,
See the desolation on the
Scrubby crags;
Here and there a building sits
And men still come and go but
To another pattern
Past the dropped coal, and twisted
Iron groaning in the gales,
Rusting in the wet mists;
In odd protected pockets chimneys
Poke their stiff shapes at skies
Indifferent to their last obscene
Defiance and naked too the view
Over the sad remembered scarp.
Below the narrow plain that sends
Its seekers up on to
This daunting hill
Reclaims them daily
But, some have come
To find uneasy sanctuary
In this bleak seclusion
High over plain, and sea
Where the fishing-boats' lights
Dip and blink in the deep-down-under
Distance.
Redundant
The Incline has no economic cause
For only trucks and miners' bus
That toil on twisting roads still
Come and go to serve the mines
That gave this place a past
And they, in turn, deny it any
Future.

Morris Marshall
February 6, 1974

THE BANJO RECORD

World's Champion Coal Shoveller

The greatest! — with the authority of the Guinness Book of Records — in the world at coal-heaving is Mr M. D. Coghlan of Reefton.

A fourth-generation member of the coal industry until he forsook the banjo for a painter's brush in February 1973, "Don" Coghlan holds a second-class coal mine manager's certificate. At the local body elections in October he won a seat on the Inangahua County Council.

Appropriately, his home is in Coal Street in the coal mining town of Reefton.

Don came to the notice of New Zealanders outside the coal industry when he was one of the Guinness Record Book holders in New Zealand who were in a television show compered by international television celebrity David Frost last year.

The Frost programme included Don being interviewed by David Frost, and a film clip of Don shovelling half a ton of coal in less than a minute.

"They came over from the NZBC in Christchurch a week before the programme to film shovelling the coal," Don told "Coal".

Unique

Coal shovelling competitions appear to be unique to New Zealand, and within this country, unique to the West Coast, although Australians hold blue metal shovelling contests.

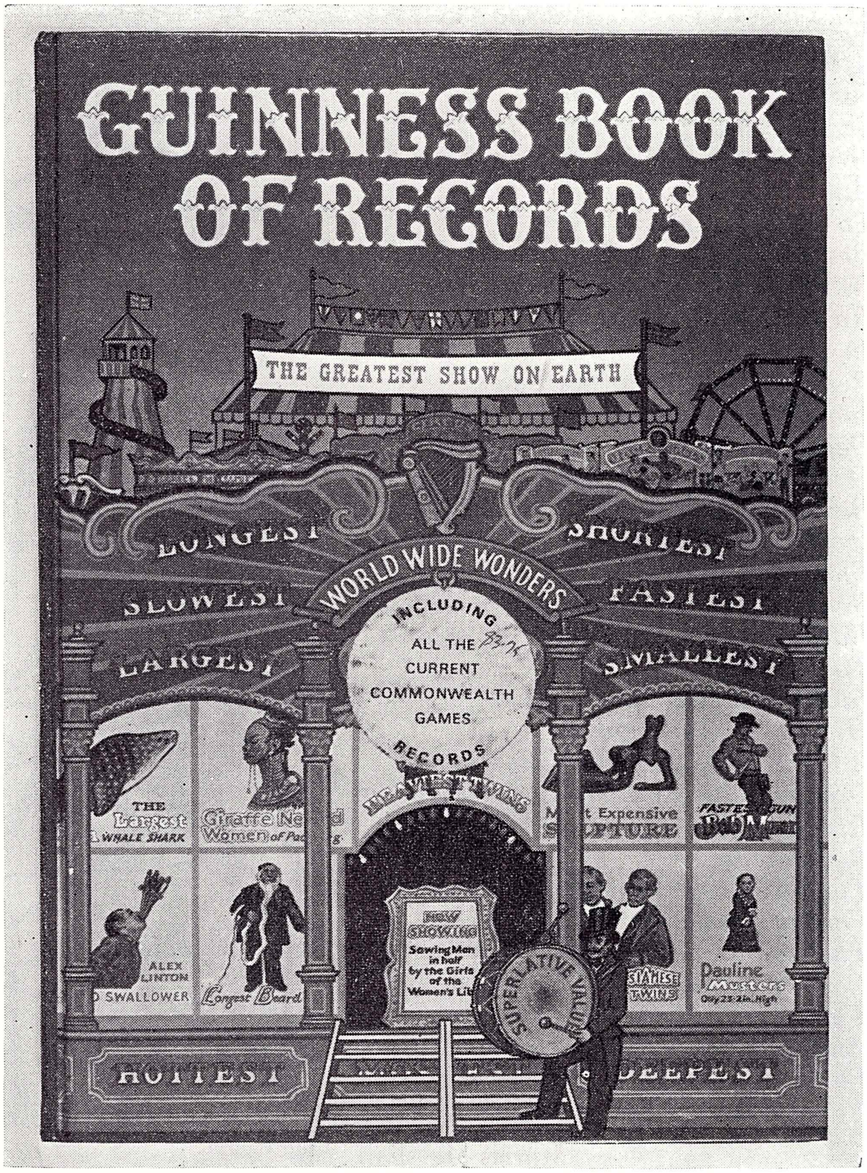
Coal shovelling competitions used to be held in Greymouth, and Don won the doubles and singles for the first time in 1968. The following year he won at Westport.

A Mr Timpson, then a farmer, who had scored successes as a sportsman and woodchopper, won in 1973. In 1974 Robin Hughes of Westport was first in a shovelling competition, D. Coghlan was second and Timpson third — all within nine-tenths of a second of one another.

Last year at Shantytown Don set an unofficial record of 45.3 seconds for shovelling half-a-ton of coal.

Shovelling coal competitively is different from shovelling coal in a mine, Don told us.

"You are scooping in competition shovelling," he said. "You'd spill too much shovelling that way in a mine."



Coal shovelling The record for filling a half-ton *508 kg* hopper with coal is 56.6 sec by D. Coghlan of Reefton, New Zealand on 3 Jan. 1969.

THE BANJO RECORD

(continued from page 14)

The equipment used in the shovelling contests is a standard skip or box, minus wheels, but rigged at its normal height above ground. This is pivoted on one end of a steel beam, which is weighted so that the box is kept at its proper height until filled with exactly half-a-ton of coal.

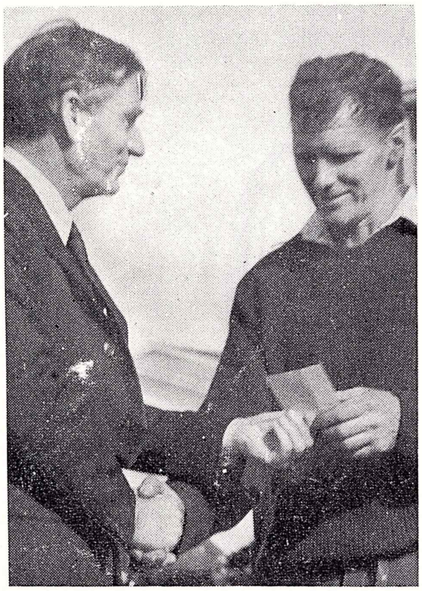
First

The Guinness Book of Records coal shovelling champion filled his first box of coal at the age of 12, in his father's mine at Boatmans (Reefton).

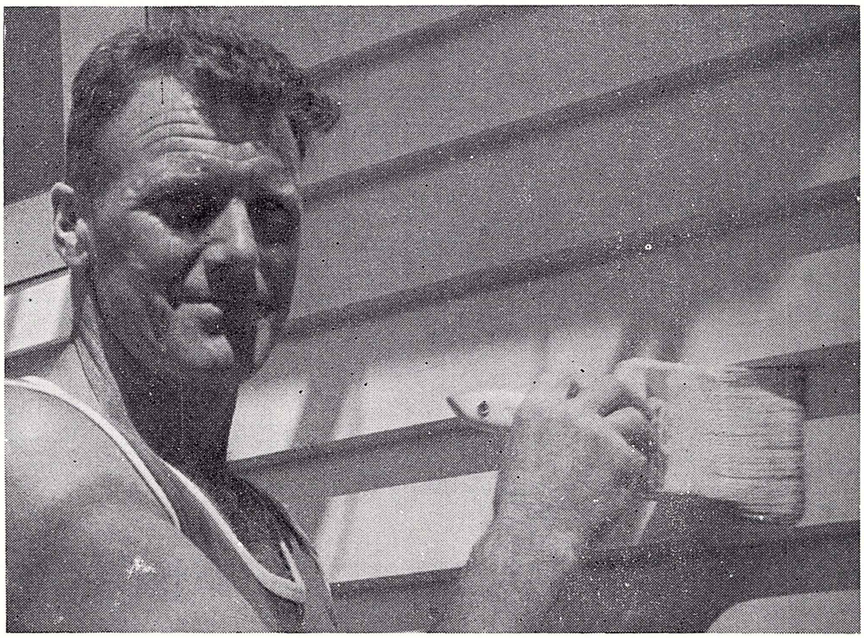
Altogether, he has had 16 wins in contests at Westport, Greymouth, Shantytown, Runanga but mainly in his home town of Reefton.

Don has done better in competitions since leaving the coal industry: "You've got to be fit!" — he says of the championship. Deer-stalking and generally keeping fit, since he left mining, have actually improved his chances.

The banjo shovel has all but disappeared from State coal mines now, as hydro mining, opencasting, scraper-loaders and the continuous and Alpine miners have taken over. Coal shovelling is now almost a relic of a past age in mining, and before long the shovelling competitions will be the only reminder of the banjo, and the physical demands it made on men.



Mr M. D. Coghlan receives a prize from the Minister of Mines, the Hon. Fraser Colman, for winning a coal shovelling competition at Westport in 1973.



Mr M. D .Coghlan as a coal miner — and now painter.

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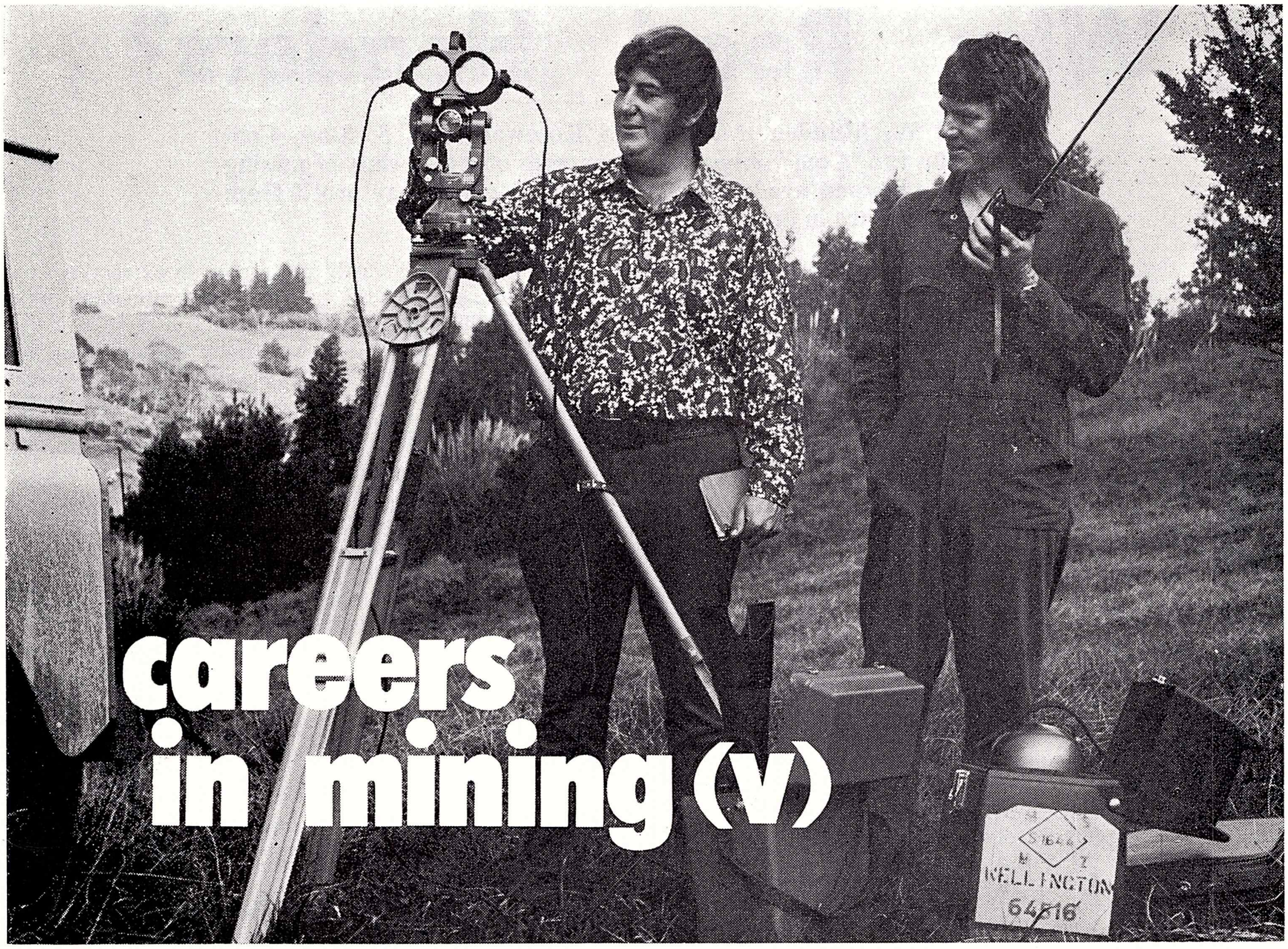


careers in mining (v)

Among the latest surveying equipment used by surveyors in the Mines Department is this Swiss-made Wild Distomat DI.10 instrument. Reflecting an infra-red ray through a prism, it enables surveyors to measure accurately distance up to 2000 metres.

COAL MINE SURVEYORS

Without surveyors, coal mining could not proceed in an orderly, planned way which extracts as much coal as possible.

But, more important, the surveyor's work contributes vitally to the safe development of coal mines. He must guide the miners to keep clear of old workings and depillared areas underground as a mine advances. Dams, creeks, swamps and towns on the surface represent danger to the miner below if the surveyor is not accurately planning the mine's development.

Conserving our major fossil fuel by avoiding wasteful extraction depends considerably on the ability of the mines surveyors.

There is, however, more to the work of a surveyor in the coal mining industry than plotting the orderly and safe development of an underground coal mine.

The mines surveyors also delineate the development of opencast workings, and are responsible for surveying the surface development and boundaries around all coal mines.

Qualify

To qualify as a mines surveyor, a young man spends three or more years in study and in learning the practicalities of the job and is trained in aspects of surveying other than purely mines work. For the ambitious, mines surveyors can become chief surveyors in a coal mine district, or manage opencast workings. Surveyors who want to become coal mine managers — and one has risen to district manager — will find that they are exempted from some of the subjects in the mine manager's examination, and that the Board of Examiners may grant some exemption from the time required in underground work in recognition of the necessary underground time required for the surveyor's qualification.

To become a mine surveyor, a young man joins the Mines Department as a survey cadet. He must have passed school certificate or higher, and have passed in mathematics.

He can enrol with the Technical Correspondence Institute for the theoretical study course, and after a year's practical surveying may sit the written examinations in surveying and draughting, instruments and definitions, and drawing and computations.

Provided he passes those subjects, at the end of two years' practical experience he can sit the written examinations in practice of surveying, engineering surveying, and general and applied geology.

Certification

After three years he can apply for final certification. To obtain this, he must prove practical experience throughout that time, including six months' opencast and topographical surveying, six months' engineering surveying, six months' underground surveying mines and three months' experience in boundary definition work (comprising field and office work).

(continued on page 18)

Why Road Headers?

Mr F. W. Munden, Manager of Rotowaro No. 5, State Coal Mines writes for "Coal" about the advantages of a new class of mining machinery, the road header, and how New Zealand may profit from overseas experience in introducing mechanisation.

During the past 18 months a new term has intruded on the New Zealand coal mining scene —"road header".

The name is now familiar among the coal mining fraternity, but many, because of its newness, may not appreciate its potential and why, in particular, this type of machine should be suitable to our requirements.

In deciding to develop coal mines as modern as any in the world, we are able to proift from the more recent technological advances in mining and, where necessary, to adapt them to suit local conditions.

Tunnelling machines have been used in soft rocks and clays by civil engineers for decades, but only within recent years has the new breed of machines termed road headers been developed.

With a toothed cutting head mounted on a hydraulically actuated boom which can be traversed across a tunnel face in any direction or angle, it now becomes possible to cut a tunnel to a predetermined arched profile in one operation.

Consequently, road headers are being increasingly used throughout the world to drive tunnels in rock of medium compressive strength.

Eliminated

Unlike explosives a road header does not shatter rock near the opening. Consequently over-break is virtually eliminated, the roof and sides of a tunnel require less trimming, are easier to support and will require less concrete for lining where this is used.

When an underground roadway collapses it will tend to form a natural arch which, in many cases, will stand, virtually unsupported for times stretching in some cases into years.

Obviously it is better to conform to the rules of nature than to work against them, and in this respect the road header can cut an arched roadway which closely follows the form of the natural arch.

It has long been the ambition of mining engineers to be able to drive development roads to the boundary of a mine before forming panels and beginning the extractive phase of coal winning operations; but in the past the need for immediate maximum production and the lack of a machine capable of high production from a development place has precluded such ambitions.

Another objective, often sought but seldom achieved, has been a system of development which would reduce the cost (both short and long term) of driving and maintaining the development headings in a mine.

Increase

The road header has the capacity to increase the rate of advance sufficiently to drive multiple headings economically to the extremity of a mine.

Formerly early development of panels and their subsequent extraction has led to costly problems and at times dangers.

Large numbers of seals have had to be inspected daily and maintained for years. Fires have occurred within panels, sometimes endangering the mine by burning around seals — always a source of potential danger and continuing cost.

Preferable

A system of mining which will allow extracting coal on the retreat is vastly preferable to extracting coal on the advance with attendant problems.

The new Huntly mines offer an opportunity to introduce the retreat system by using road headers to drive five or six development roads to the ends of the mines before beginning panels and extracting coal.

In this field it could well be that New Zealand is a pioneer. Although road headers are now almost universally used in developing single road access in Continental mines, they have yet to be used to develop multiple headings for bord and pillar mining — not because such an operation presents too many difficulties, but, because these machines have been developed in Europe where "longwall" and to a lesser degree "shortwall" mining is king.

All investigations to date confirm that these machines are capable of developing New Zealand mines in a manner which will be safer, less costly and will ultimately allow greater recovery of coal with fewer problems than would be the case if former methods were used.

CAREERS IN MINING

(continued from page 17)

Where appropriate experience cannot be obtained with the Mines Department, the department arranges for the survey cadet to work with the Department of Lands and Survey for a period to obtain it.

The examination candidate passes oral as well as written examinations in the required subjects, and submits notes and plans he has done himself of a mine, an engineering survey of a road, and a topographical survey of undulating land showing contours. He must also submit a plan he has drawn of a building.

The examiners are the same as those who form the Board of Examiners for mine managers, the Chief Inspector of Coal Mines usually being the chairman, and the Surveyor-General or his representative being among the members.

While the examinations can be passed within three years, survey cadets normally take about five years to complete the course and in any case must be 21 years old before being issued with a mine surveyor's certificate. Full details of the examination requirements for mine surveyors are printed in the Coal Mines Regulations 1939.

Reciprocal agreements with Australia, South Africa and Britain usually recognise the New Zealand qualification and surveyors who have qualified in mines here in most cases may work at their profession in those countries. Although a mine surveyor cannot practise as a registered surveyor, there are employment opportunities with county councils and some similar bodies.

OBITUARY

Mr. A. V. PRENDIVILLE C.B.E.

Highly respected and liked by all he came into contact with, the president of United Mineworkers, Mr A. V. Prendiville, C.B.E., died in Wellington on Saturday, January 18.

Mr Prendiville was born in Southland and brought up in Nightcaps and always retained his links with the area. He qualified as a deputy in the coal mining industry at the age of 21 — one of the youngest in New Zealand — but preferred to use his talents working for his fellow miners through the union, rather than progressing as a mine manager.

He became fulltime secretary and workman's inspector for the Southland Miners' Union in 1929, and president of United Mineworkers in 1932-33, but did not seek re-election.

Mr Prendiville returned to the position as president in 1939, succeeding Mr Jack Devlin and remained until his death.

EMINENCE

He not only achieved prominence within the miners' union, but achieved eminence for it and the miners he represented by his standing within the New Zealand labour movement.

In 1951 he studied American industry and coal mining in particular, as the guest of the United States Department of State, when he was the first workers' delegate selected for a four months' study and lecture tour. Six years later he represented the Federation of Labour as a delegate at the International Labour Organisation at Geneva and the International Confederation of Free Trade Unions conference at Tunisia.

Mr Prendiville has attended several international miners' conferences and the United Mineworkers were honoured when he was appointed to represent Asian miners at a conference at Geneva in 1973.

In New Zealand Mr Prendiville was chosen to represent the Federation of Labour on organisations such as the N.Z. Gas Council, and from its inception, the now defunct Industrial Advisory Council. Also from its inception, he has been a member of the Federation's policy committee.

Within the coal industry Mr Prendiville was a foundation member of the Coal Mining Districts' Welfare and Research Council, the Coal Council and the Coal Research Association.

FIGHTER

Those who served with him in those organisations, and others in governments and elsewhere knew "Tony" Prendiville as a consistent fighter for the greater use of coal as a source of energy.

His recognition of the long-term need for developing coal use, and his consistent efforts to promote these, were all part of his work for the coal miners he represented as the way to secure the future interests for them. He believed in strikes only as a weapon of last resort, having seen the misery and hardship which this form of industrial action can cause.

As a former miner he was well aware of the hazards of the work, and sat on the commissions that investigated mine disasters at the Renown and Strongman Mines.

HONOURED

Last year he was honoured as a Commander of the Order of the British Empire, and invested by Her Majesty the Queen of New Zealand in Wellington.

"This honour is a tribute to the coal mining industry and the men in it as well as to me personally," he commented at the time.

Mr Prendiville will also be remembered for his interest in racehorses. One of his most successful horses was a pacer, Turco, which ran in the early fifties. He also gained considerable success with a trotter named Jimmy Dillan and another pacer, Montana Gold, which has been racing well this season.

He was president of the Wairio Trotting Club, and his former interest in rugby as a player was reflected in his presidency of the Nightcaps Rugby Football Club for a number of years after he retired from active participation.

His death deprives the coal industry of an outstanding leader and fighter for its interests, and United Mineworkers of a leader whose mana resounded to the credit of the miners whom he represented so ably for 37 years as their president.

The late "TONY" PRENDIVILLE

President, United Mineworkers, 1932-33, 1939-75

"Tony Prendiville was a man I saw a great deal of, and whom I came to respect greatly. He never missed an opportunity to press for advantages for the miners he represented so ably, and I quickly came to recognise his skills in debate and negotiation and always appreciated his honesty and strength of purpose.

"He was also respected in the other organisations where he represented the United Mineworkers, such as the Coal Research Association and the Coal Mining Districts' Welfare and Research Council and I believe that his mana extended to bring credit to the coal miners in particular, and to the industry generally. His fairness and sense of humour frequently enabled negotiations to proceed more easily and more fruitfully.

"Although we frequently opposed each other in the course of our work, I came to have great personal regard for Tony, and the coal industry has lost an outstanding leader.

"He was a true gentleman and I feel as if I have lost a close friend."

— Mr I. D. Dick,
Secretary of Mines.

"I feel that the coal industry, as well as United Mineworkers, has suffered a great loss by the death of Tony Prendiville.

"He was an outstanding leader who spent his life working for the miners and bettering their conditions. His skill in negotiating, and in defending our interests has contributed greatly to the improved working conditions we have today.

"Possibly the best tribute we can pay Tony is to remember his example, and continue the work he has been doing for us. I am sure that the United Mineworkers will remember him and be inspired by his example to carry on in his tradition, working in the miners' interests."

— Mr M. Bassick,
National Secretary, United Mineworkers.

"Being a personal friend of Tony Prendiville it was with great regret that I heard of his death.

"I had known Tony for over 30 years, first at State Coal Mines, Dunollie in the early 1940s, at Head Office, Wanganui and latterly at Christchurch.

"Although not really connected with the marketing side of the industry Tony always took a deep interest in the sales of coal and never failed to ascertain how sales were on his frequent visits to my office.

"For the last two years I have served on the executive of Coal Research Association of which Mr Prendiville was a foundation member. He was always forthright with his statements for the good of the Coal Industry and friend or foe, it cut no ice with Tony if he had a point to make.

"I have lost a long-time friend, and the industry and the unions in particular, have lost a man who is going to be extremely difficult to replace."

— Mr S. Armstrong,
President, NZ Coal Merchants' Federation.

"The passing of Mr Tony Prendiville is most regrettable. I have known Tony for many years and have attended many meetings and conferences, at which his was usually the master brain.

"He always drove a hard bargain, but was always very fair to both sides. Those in the mining industry will miss a great friend, adviser and organiser.

"The live spark has now gone out."

— Sir William Stevenson.

"It was with profound shock and a feeling of personal
sudden passing of Tony Prendiville, and this would be refle
industry and the Trade Union movement in particular.

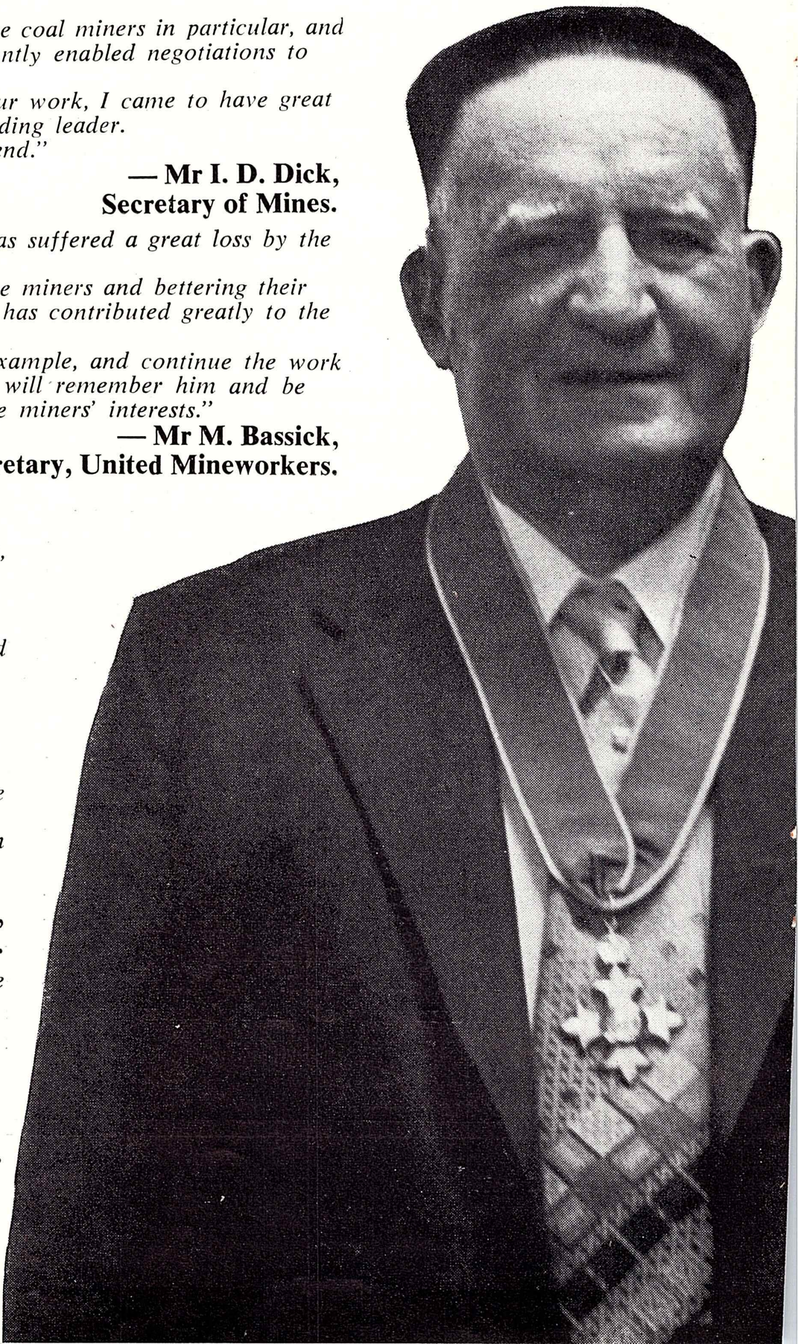
"A lifetime of active, dedicated service to the coal minin
and this contribution was reflected in the number present a
funeral.

"Tony Prendiville will long be remembered for his out
unremitting determination to promote and fight for what h
interests of the industry and those who worked in it.

"His views, sound judgement, and sense of fair play and res
and listened to with respect by all who had dealings with h
than any other, will have gone a long way to ensure that t
which he devoted his life faced up to the difficult challeng
fitting that his life's work was officially recognised by the a
New Year's Honours List of 1974.

"I personally count it a privilege to have been so closely ass
past two years and I, along with others, will miss his advice a

"It would be his wish that those who follow have the sam
to win for coal its rightful role and place in the energy req
join with others in extending my deepest sympathy to his fa
suffered."



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— Fraser Colman,
Minister of Mines.

Visiting Rotowaro No. 5 mechanised mine at Huntly, in company with the Minister of Mines, the Hon. Fraser Colman, Mrs Colman, Mr K. L. Richardson, Minister's secretary and Huntly Union officials. (Photograph courtesy "New Zealand Herald")

*"Tony was a unique person with a great understanding and
eep sense of loyalty for the industry. He was concerned with
he welfare of all facets of the trade and apart from his own
articular interests, a friend of all those associated with coal.
le was a valuable member of the Coal Research Association
nd contributed much to its success. I respected him greatly
nd a leader of his type will be greatly missed."*

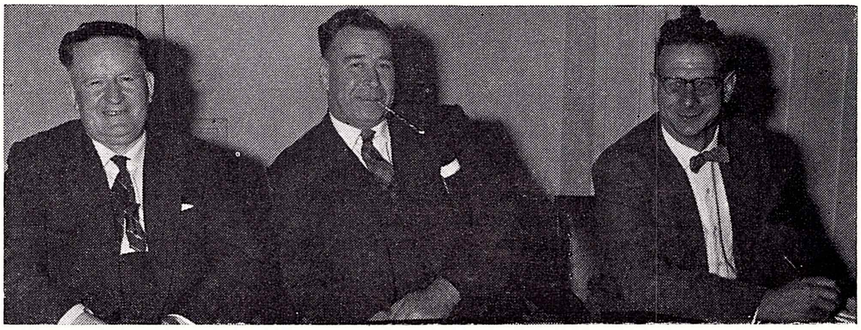
— Mr G. Brunt, Chairman, Coal Research Association

*"I know of no man who has contributed more to the
ability and well being of the coal industry in New Zealand
an Mr Prendiville did.*

*"That an industry so difficult in itself and, because of those
atural difficulties, so open to possibilities of dispute has been
ee from major stoppages for so many years, has been largely
ue to his guidance and tact.*

*"What a pity that he will not be with us to share in the
esurgence in coal mining which is so imminent."*

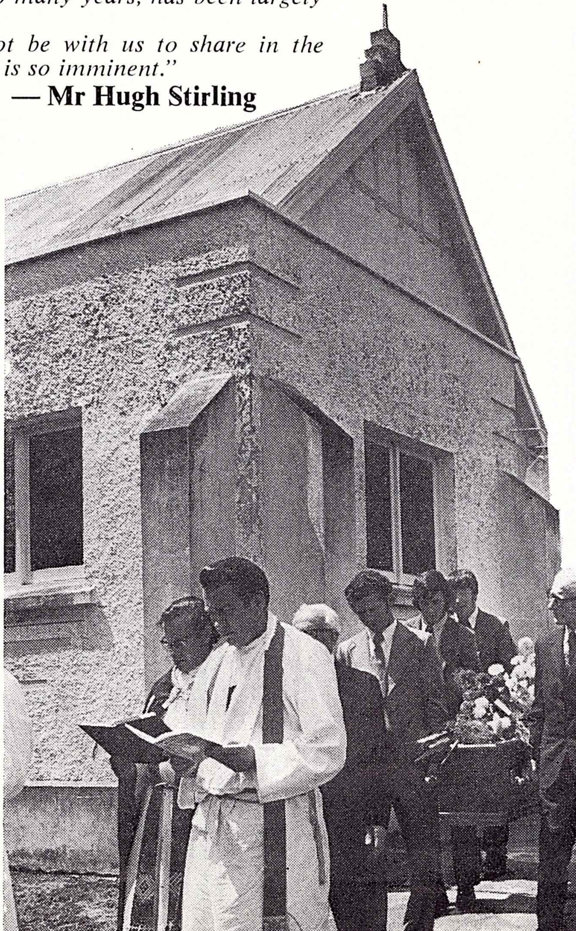
— Mr Hugh Stirling



At an agreement conference with the late Jock White, then national secretary of United Mineworkers, and Mr F. W. Munden, now manager of Rotowaro No. 5 and at that time a member of United Mineworkers' executive.

Representing United Mineworkers on the executive of the Coal Research Association.

Invested with the C.B.E., February, 1974.



An estimated 1000 people attended Mr Prendiville's funeral at Nightcaps on January 21, the area where Mr Prendiville was born and educated. The Minister of Mines, the Hon. Fraser Colman, Mr I. D. Dick, Secretary of Mines, Mr S. Armstrong, president of the New Zealand Coal Merchants' Federation and many other leaders of the miners' unions and the coal industry attended.

(Further messages on next page)

TRIBUTES TO A.V. PRENDIVILLE

(continued from page 21)

"The late Tony Prendiville was highly respected not only in the Trade Union movement, but among employers and public alike. He had long experience in the mining industry working as a miner and as a trade union administrator. He was a champion of the miners and was instrumental in having many improvements made in their working conditions and safety in employment. He was a staunch advocate of the democratic system and the rights of the individual and was impatient with anything that savoured of dictatorship. Tony Prendiville steered the miners through some very difficult times. With the closing down of a number of coal mines on the West Coast he realised the implications of unemployment and continually made representations to various Governments to have the use of coal continued and the industry expanded. He was a loyal and valued member of the New Zealand Federation of Labour and his services and advice will be sadly missed."

— Thos. E. Skinner,
President,
N.Z. Federation of Labour.

"Tony was an institution; there can be no doubt about that. For almost an entire lifetime he presided over the fluctuating fortunes of mineworkers and never once relaxed his efforts for their betterment.

"He was a man of many parts — humorist, sportsman and good host in his private life and participant in many public activities associated with mining and fuel interests and the trade union movement where his contributions were considerable and single-minded.

"His like will not be seen again."

— Mr P. M. Outhwaite,
Under-Secretary of Mines,
1960-67.

COAL FIRES TOP CHEESE AWARD

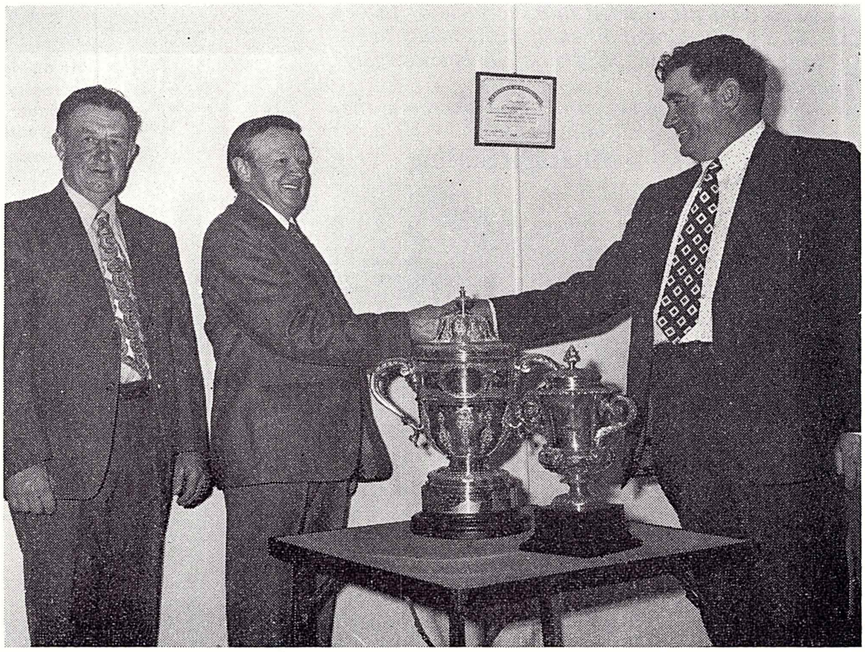
Archer's coal from Reefton coupled with the expertise of Mr F. (Frank) H. Moloney in cheese making, made it possible for the manager of the Clandeboye Dairy Factory near Temuka to win the highest award in cheese making. Mr Moloney has been presented with the A. J. Mills trophy for the purest and best finished cheese in New Zealand for the 1973-74 season.

This is the first time in 21 years since the Mills trophy was presented that it has been awarded to a South Island factory. Mr Moloney's cheese for the Dairy Board's South Island trophy was also graded highest in New Zealand.

The factory also won the Timaru Harbour Board's trophy for the highest grade of cheese to be exported through the Timaru Port. This trophy is competed for by the four district factories, and has been won by Clandeboye in 13 of the 14 years Mr Moloney has been manager.

Mr Moloney has been in cheese making for 42 years and began at the Northope factory in Southland. He worked his way through other Southland factories before being appointed to Clandeboye in 1960.

The Clandeboye Co-operative Dairy Co. Limited is nine miles from Temuka in South Canterbury and was established in 1910. Steam used in cheese making is raised in an Anderson 30 h.p. boiler using Archer's slack. Clandeboye has been chosen for the future amalgamation of three of the district's dairy factories. A 9500lb/hr Vekos boiler will possibly be installed to provide steam to enable still more high quality cheese to be made.



Mr F. H. Moloney, manager of the Clandeboye Dairy Factory (centre) is presented with the Mills trophy for the purest and best finished cheese in New Zealand and the Dairy Board's South Island trophy for the highest grade of cheese. Mr G. McKenzie (right), the South Island member of the Dairy Board is making the presentation and watching is Mr A. J. Donohue, chairman of the factory's board of directors.

FRED'S FIREBALLS

Bill Milligan Fred Ratahi

Ross Hill

"It wasn't our choosing," Fred Ratahi told "Coal".

We were asking why Fred's group got the name of "Fred's Fireballs" — was the sound so hot, we wondered?

"It was a sort of nickname that stuck to us," Fred — a driver-operator in the coal industry at Stockton and Ngakawau — enlightened us.

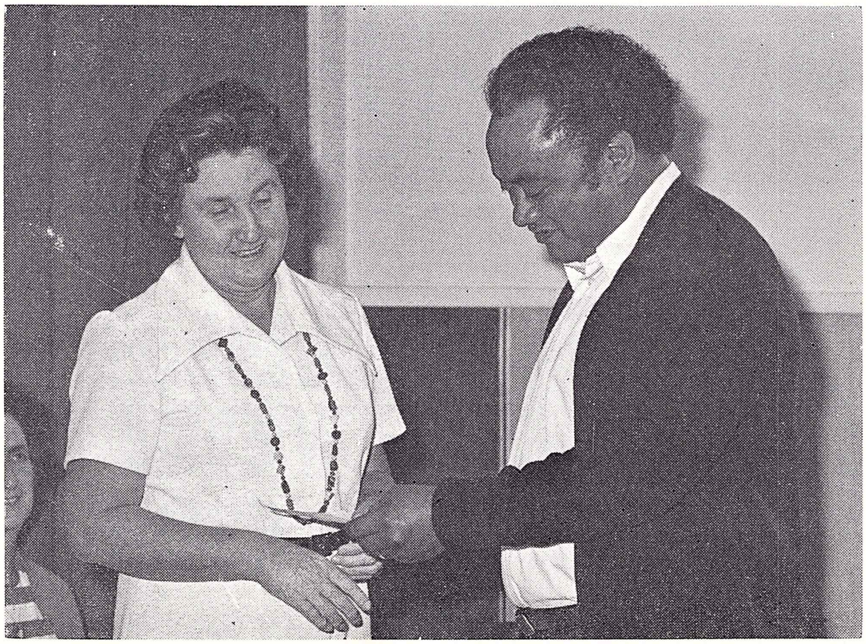
With Fred Ratahi on drums, Stockton electrician Ross Hill and former opencast worker Bill Milligan on guitar, Fred's Fireballs make the music scene for coal mining entertainment in Granity and associated areas in the Buller.

"We play what the crowd wants," Fred says.

What the crowd wants in the Buller these days can be almost anything from stamping rock to a more traditional Gay Gordons: Fred's Fireballs can do it all.

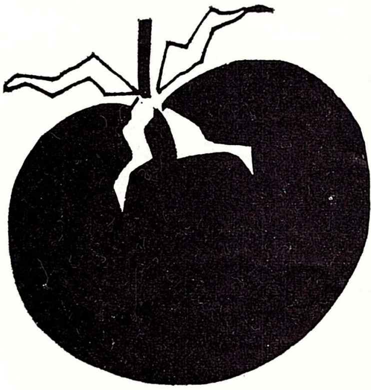
"I had a band in Wellington," Fred says, of his pre-coal and pre-Buller era. Originally from Mokau in North Taranaki, Fred Ratahi worked for three years in Wellington with the Post Office.

(continued on page 26)



Fred Ratahi hands over a $1000 cheque to the Buller president of the Intellectually Handicapped Children's Society, Miss Joan McGreevy. The cheque represents the proceeds of a cabaret held at Granity in aid of the charity.

Mr B. Hart (left) and a friend discuss tomatoes — surrounded by them.



VIABLE IF YOU CONVERT TO COAL

Canterbury Tomato-Grower's Coal Conversion described

(See story on next page)

Chances are, next time you bite into a succulent hothouse tomato, if it came from Christchurch it grew to its tasty redness in a coal-heated hothouse.

Mr Byron Hart of Christchurch is heating his eight glasshouses — covering 1800 square feet — since his new plant was finished in September — with coal.

He's one of at least six growers in the area who have converted to coal.

"The conversion cost about $2500," he says.

"It saves me about $3000 per year."

Formerly his fuel costs were $2000, but with recent rises for imported fuel the annual bill would have reached $4600. He estimates that his coal bill will come to $1500 annually.

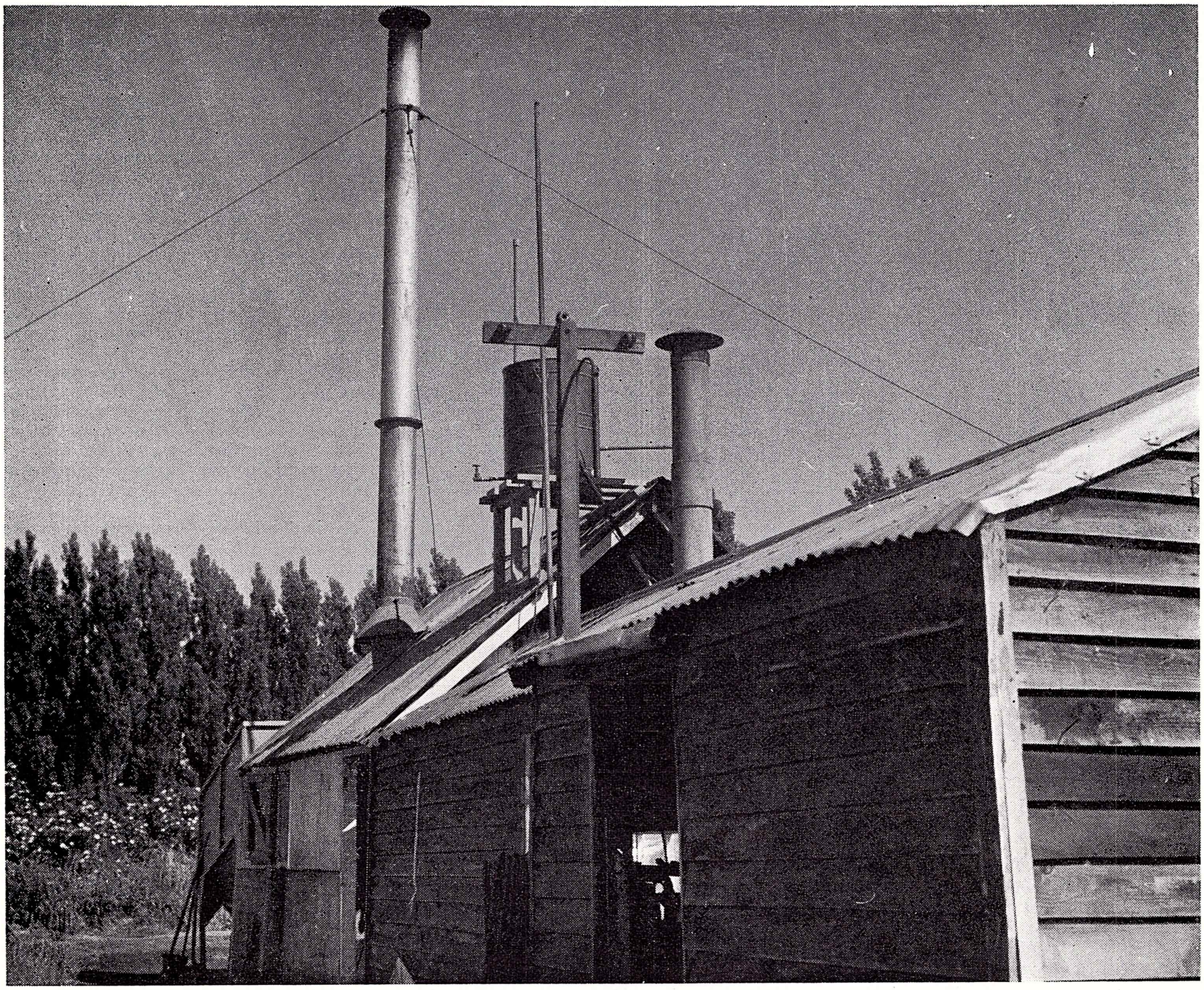
His boiler is an old 14.7 hp Cochran, condemned as a steamer but now used as a 1,250,000 BTU hot water boiler.

The Fuel Advisory Service assessed the capacity of the boiler and advised on the type of fuel to be used.

As well as growing tomatoes and green peppers for eating, Mr Hart grows tomatoes for seed production. Some years ago the Crop Research Division of D.S.I.R. at Lincoln College in Canterbury developed a strain of wild Peruvian tomato which was resistant to a virus disease which hurt commercial crops. On Mr Hart's property this strain is crossed with a Canadian variety which is resistant to Leaf Mould, another troublesome disease, the resulting seed having a double resistance and vigour which is proving popular throughout New Zealand.

Six women have the delicate job of removing the male part of the flower of one variety, leaving only the pistil and applying with a fine brush the pollen extracted by hand from the stamen of the flower of the other variety to give an F.1. hybrid.

Mr Hart began growing green peppers in heated glasshouses in 1962 and is thought to be the first in this field. He is growing an American hybrid which, like the tomatoes he grows, is resistant to virus. He says that the annual consumption of pepper has doubled many times over since he began growing them and as people learn to use them. Many people believe that the sweet red pepper is a different variety but, in fact, the green pepper left on the bush to ripen slowly turns yellow, orange and at last red.



Coal used to keep the tomatoes at the right temperature in their glasshouse is a mixture of half Strongman and half Ohai.

The tomato grower aims to get the earliest market for his product, and heat is essential because temperatures must never fall below 15.6° Celsius (60° F) or below 18.3° C (65° F) for the peppers.

The property has been growing tomatoes for 40 years, and originally used coal until 20 years ago.

The Canterbury tomato industry's main competition is from Auckland, where although the northern centre has freight cost and transport problems there is less need for heating.

"It's still a viable industry," Mr Hart says of Canterbury tomato growing, "— If you convert to coal."

"If the coal is well washed it isn't hurt by moisture," Mr Hart (left) tells Mr A. L. Henry of the Coal Advisory Service.

REVIEW

PETER GRANT, COALMINER

"Peter Grant, Coalminer" is a 24-page booklet in the "Living In New Zealand" series published by Reed Education. It is written by Shona Flint and has many black and white photographs by Wellington photographer John Johnstone. Several maps, charts, a newspaper clipping and an historical photograph from the Alexander Turnbull Library contribute to the appeal of the book. The cover is in full colour.

The series is aimed at children in the middle level of primary schools (that is, children of about nine to 12) but it should be of interest to a much broader spectrum.

It has been prepared for the social studies topic "how people live and meet their needs in different parts of New Zealand", and to highlight the human aspect, the text focuses on the character of Peter Grant, a miner in a small private coal mine on the West Coast, showing various aspects of his life at work and at home.

Peter Grant lives in Runanga, near Greymouth, and works in the Mountainside Coal Party Mine. While the book gives a fair description of the life of a miner in such a mine, and describes accurately the working of such a mine, to some extent it is restricted by being confined to the hydro system, which does not have extensive use in New Zealand. Small private mines have a place in the Grey Valley area, where the faulted seams do not allow mechanised working, but such mining is not symptomatic of the modern developments in coal mining in New Zealand as our coal reserves are becoming increasingly important to our energy needs.

Otherwise the general principles of coal mining, the hazards, the attributes of coal, and the managerial possibilities are well covered. The potential of mechanised mining is mentioned and two photographs of the continuous mine at Huntly show the way coal mining is heading.

As coal mining — particularly in the Waikato — is facing unprecedented expansion, "Peter Grant, Coalminer" may be valuable in awakening awareness of the potential of coal and its importance to New Zealand, and inspiring the next generation to see the possibilities of the coal industry and its future.

FRED'S FIREBALLS

(concluded from page 23)

Beat

He hit the beat as a police constable in the capital city for a time, then back to the Post Office until his Bullerborn wife talked him into quitting the Wellington scene for the coal beneath the Buller rock.

"There was no band here," he says, talking of his advent in the Buller.

"So I started one."

Freds' Fireballs have a ball for local charity — shortly before "Coal" came to call the Fireballs had played at a local charity cabaret which raised $1000 for local charity.

The Fireballs have also helped raise money for and to a worth-while cause, pensioners.

"We tone it down for the older people," Fred says.

The Fireballs numbered five originally, one loss being when Fred Ratahi's brother-in-law left for Levin.

The Fireballs have made the airwaves, having broadcast from the Greymouth NZBC radio station.

And what more useful man in a group these days, when the electronic sound is part and parcel of the modern music scene, than an electrician? Guitar man Ross Hill is more than a useful sideman with guitar, soldering iron and pliers — he's the vocal that gives the group more than an electric kick to the action.

Fred's skins and his sidemen's guitars have put rock into coal in a way that really makes the fire flame — and contributed much to charity in the flicker.

An engineer's dream comes true . . .

"Skyhook" concept attained by Ministry of Works engineers and RNZAF

"At some time or other it has been every engineer's dream to have a 'skyhook'," writes Ken Paul, fuel technologist of the Coal Research Association at Palmerston North.

Engineer's dream or not, it is a time-honoured trick to send the apprentice out on a wild-goose chase for a skyhook. But after watching the RNZAF at work lowering a new chimney stack into position at Waiouru Military Camp, Ken Paul won't ever try the trick on a new boy — he might come back with a helicopter, and be within his rights in providing a genuine skyhook.

A new Vekos 14,500lbs/hour economic boiler, coal-fired, has been installed at Waiouru. Sandwiched between two existing boilers, the problem taxed Ministry of Works installation staff on how any mobile crane could be manoeuvred to lift sections of the stack for the new boiler into place.

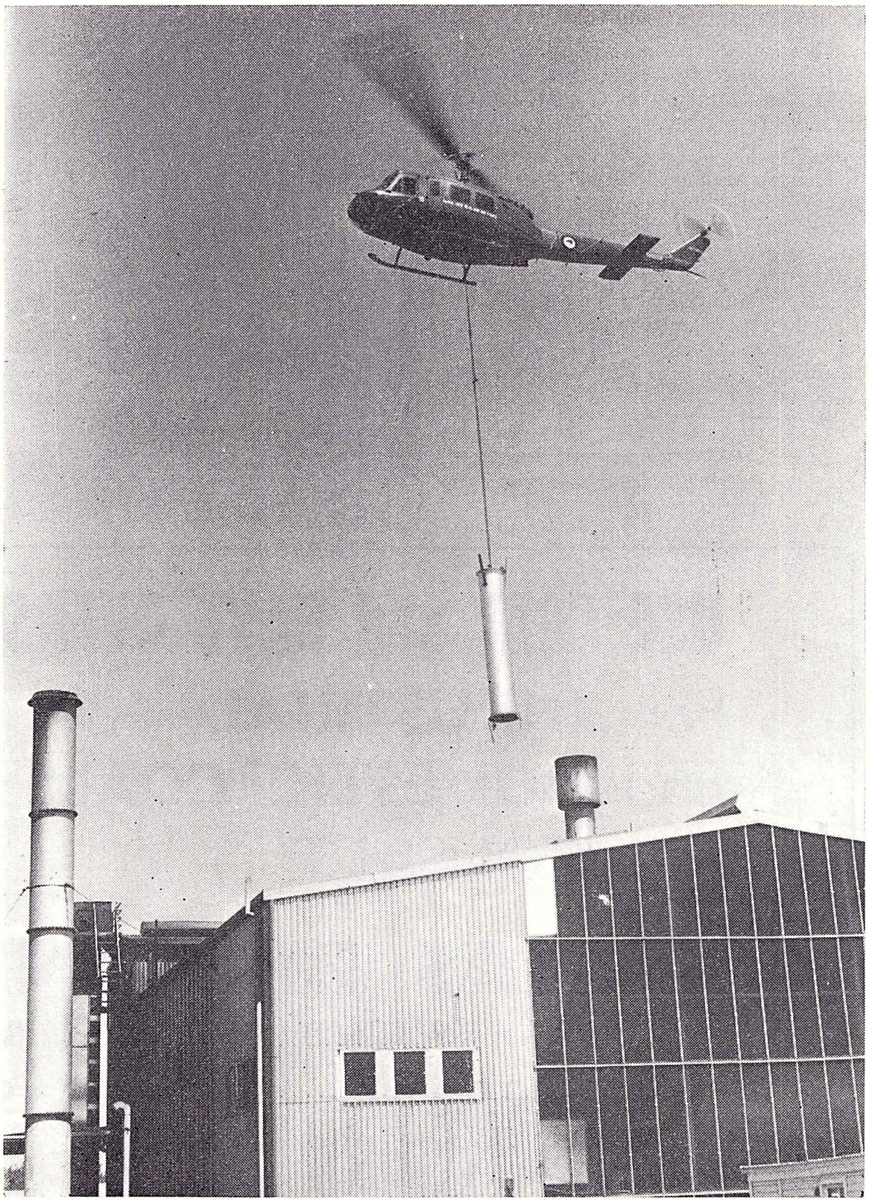
"Oh, for a sky-hook," someone in the Ministry of Works must have said, as the ideal solution to a difficult task.

The ideal solution was forthcoming. No. 3 Squadron, RNZAF, Hobsonville provided an Iroquois helicopter to lift and lower the chimney sections. Capable of lifting two tons, the Iroquois could manage the two 28 inch diameter sections weighing 1620lb and 1457lb.

The sections were laid out on a nearby sports field, giving Flight Lieutenant Barry Payne, pilot of the Iroquois, plenty of room to manoeuvre.

First a preliminary run was flown over the short route between the sports ground and the boilerhouse, and then the lift began in earnest.

The first section was quickly fastened, lifted to the boilerhouse by way of a route clear of buildings and people, and then lowered gently into



RNZAF Iroquois helicopter dropping stack into position at Waiouru.

AN ENGINEER'S DREAM COMES TRUE

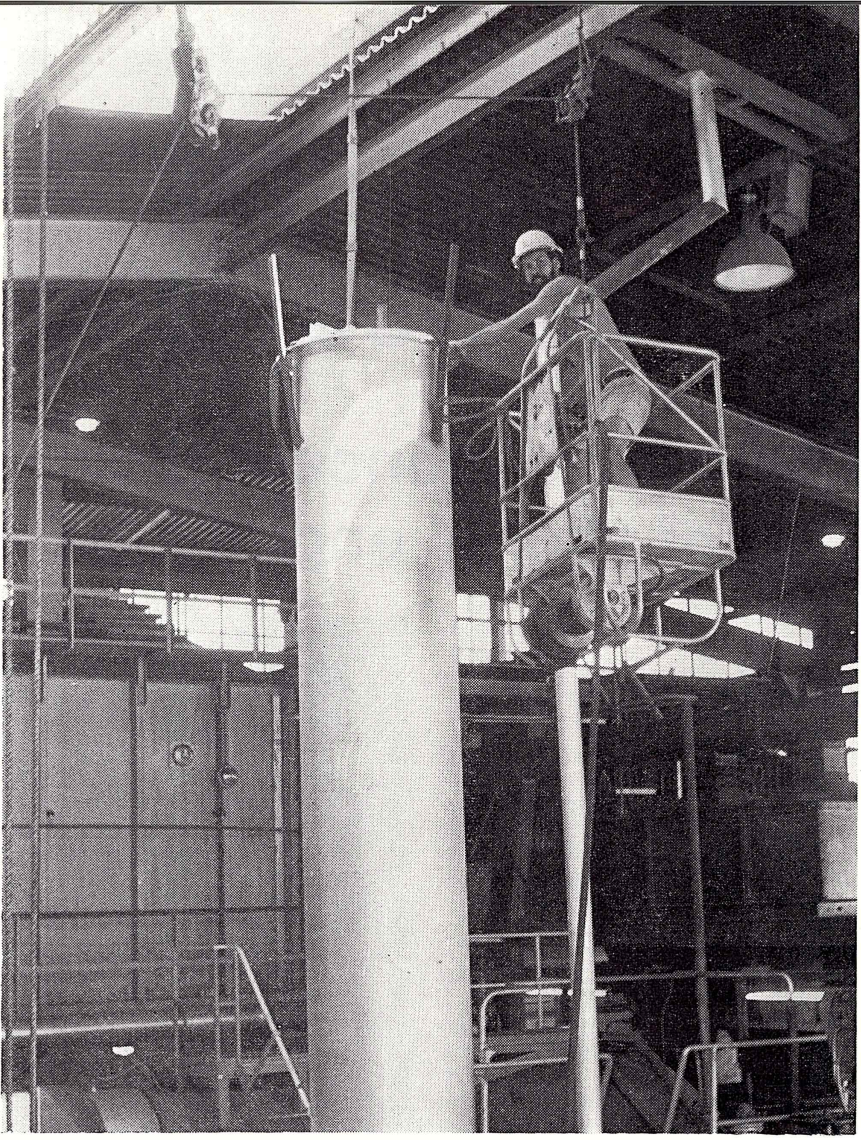
(concluded from page 27)

position over the exit gas flange of the Vekos. Ministry of Works staff engineers guided it into place and bolted it down.

The Iroquois stayed overhead while the stack was bolted down because the machine created an 80-knot downdraught, which might have deflected the stack section or caused one of the engineers to have an accident if a gale of such force changed direction suddenly.

The second section went into position as smoothly as the first, so that a 35 foot chimney had been hoisted into position from the sky in a faultless exercise.

The preliminary dummy run, with the 80-knot downdraught gale ensured there was no dust whipped up when the engineers were in position to guide the first section home. One dustfree boilerhouse needed only a washdown with a hose to show a state of cleanliness to satisfy the most fastidious of old-time sergeants major!



MOW engineer ready for second section of helicopter-lifted stack

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MINING INSTITUTE SEMINAR

West Coast venue for Coal and Mining Papers

The annual conference of mining and quarrying men, members of the New Zealand Institute of Mining began at Westport last December. Mr Rokuro Adachi of Japan, was an overseas delegate who also attended.

The assembly at Westport allowed members to visit coal mines, underground and opencast, in the Buller and to see over the cement works at Cape Foulwind.

The delegates travelling to Greymouth by way of Reefton, had a brief look at Reefton's gold mining past and present coal mining and reached Greymouth on December 2 ready for the formal business of the seminar and presentations of papers.

"THINK!"

"It is not my intention to produce a paper in great detail but rather to present to you a skeleton of the subject so that you, as people engaged in the quarrying industry, in one way or another, will pause to **THINK!"** Mr L. S. Jones, Chief Inspector of Mines and Quarries, said in introducing his paper "Quarrying and its Environment".

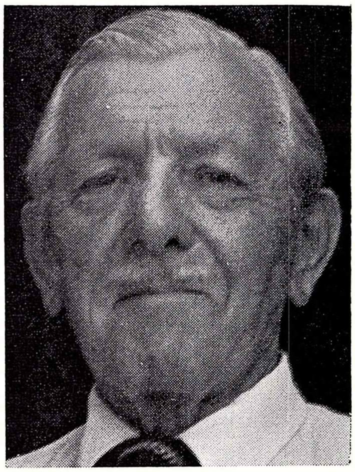
In discussing environmental problems of quarrying, applicable to opencast coal mining and to a lesser extent underground coal mining, Mr Jones pointed out that the surface and sub-surface of the land; the air above; and the natural waters on and adjoining the land are included in the environment affected by quarrying.

"The rabid environmentalist has, of course, the perfect answer — you do not start to quarry in the first place," Mr Jones said. "One wonders, at times, how such people can accept the house they live in, the building they work in, the road they walk on — they walk because to drive a car obviously would pollute the air they breathe — and so on."

Mr Jones pointed out that some quarrying in the past had been started without considering rehabilitating the land afterwards. By carefully surveying the proposed quarry, a design is usually possible which would not only give the best possible quarry from an economic point of view, but will also leave the area in the best possible state from the environmental point of view.

"Removal of all that 'junk' that accumulates, proper storage areas and so on will pay dividends in the public goodwill. The planting of the odd lawn around administration buildings — even the odd flower bed — does not cost the world and makes the quarry surroundings more pleasant for the quarry personnel let alone the general public."

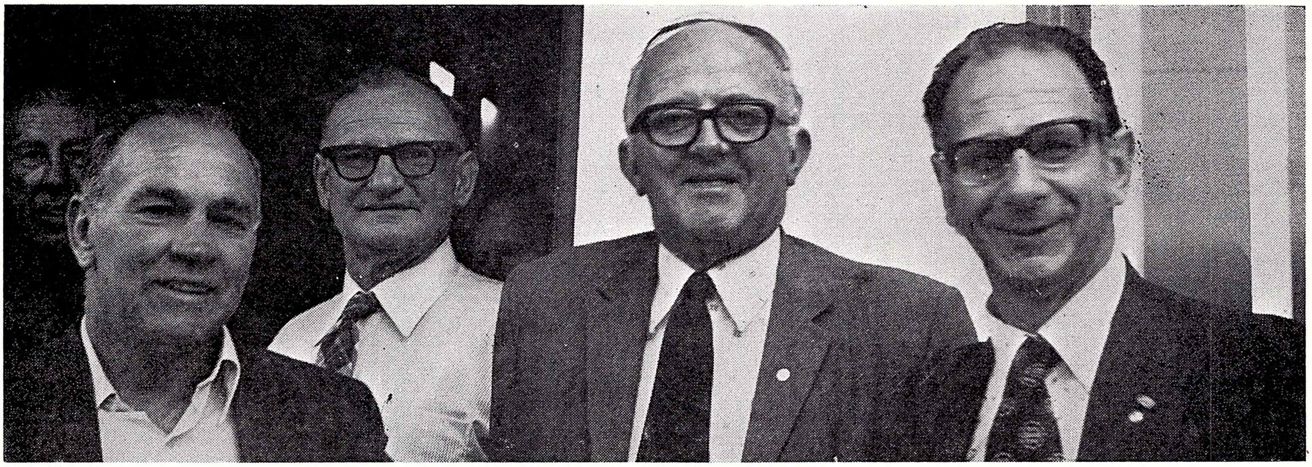
Mr Jones reviewed preventative measures to alleviate water and noise pollution.


"We've had a most successful seminar," Mr A. G. Palmer, who was elected president of the Institute of Mining, said when the seminar at Greymouth, in December, ended.

"It is right and proper that those people holding the management of quarrying in their hands should have regard for the environment and should accept their part in making the country a better place to live in," he said.

Heating

Dr J. Stott described work at Canterbury University by two research students, Dr B. A. Murtagh and Dr T. Q. Nguyen, on quantifying spontaneous heating in coal.


The Greymouth venue led to a meeting of old friends. Passing by the seminar hall, Mr Roy Beadle (second from right), formerly a United Mineworkers' representative renewed an old friendship with Mr F. W. Munden (right). Mr Munden, once a national councillor of United Mineworkers is now manager of Rotowaro No. 5 in the Waikato. Mr T. Merriman (left) is an underviewer at Morley. In the background, Mr Garth Richards, Inspector of Coal Mines at Dunedin.

"The main interest to the mining fraternity in work of this nature is how it can be applied practically," Dr Stott said. "The only fair claim which can be made is that we now understand the spontaneous heating process more than before so that a greater degree of confidence in dealing with the heating should result.

After detailing the bases of the tests and how the equations were derived, Dr Stott concluded: "It is hoped that this paper will help to produce a feeling amongst mining engineers that spontaneous heating is not a strange process to be treated with mystical respect but rather one in which a certain amount of heat has to evaporate a certain amount of water, this process being finely balanced so that as a heating usually consists of quite a small 'hot spot' even a small increase in the amount of water would hold the heating in check."

The Seikan undersea tunnel in Japan, connecting the islands of Honshu and Hokkaido, was described by Messrs L. S. Jones and J. W. Dempster of the Mines Department. The tunnel, 53.9 km long, under a maximum depth of 136 metres under the sea, is expected to be finished for rail traffic by "bullet train" by 1979.

Japan

Mr Rokuro Adachi, a senior mining engineer of the Japan Overseas Coal Development Co. Ltd, delivered a paper "Mechanical Mining in Japan". The paper was in three parts, giving the history of coal mining in Japan and describing present coal deposits; mechanical mining in Japan and the central control system in that country.

Mr Adachi's paper included tables of production statistics and comprehensive descriptions of various systems used in Japanese collieries. He discussed the longwall slicing method used at the Miike Coal Mine, one of the oldest and largest mines in the country, which produces six million tons annually. Since 1925 the mining area has been spread under the sea, and thick seam mining with the slicing method was introduced in 1957.

Higher mechanisation and rationalisation achieved an output of 1000 tons a day.

The W-SD system used at Kushiro Coal Mine obtains 4-6000 tons per day under unfavourable conditions. The technique and know-how developed in this system is being applied in collieries by a recently-established company, Taiheiyo Engineering Inc.

Advanced

"It is one of the most advanced mining methods not only to increase the productivity and to reduce the cost, but also to be able to save the investment in coal mine facilities," Mr Adachi said, in the section of his paper describing hydraulic mining at Sunagawa Coal Mine.

Hydraulic mining began in 1963, after the Mitsui Mining Co. began to construct a hydraulic mining area in the steeply pitching coalbeds underground in the Sunagawa coal mine in Hokkaido. The coalbeds in this area dip from 45 to 60 degrees and lie below the depth of 400 metres from the surface.

As the mining depth increased, now 500 to 700 metres from the surface, the advantage of hydraulic mining received more recognition.

In 1971 hydraulic mining from this mine produced 60 per cent of 1.7 million tons of coal.

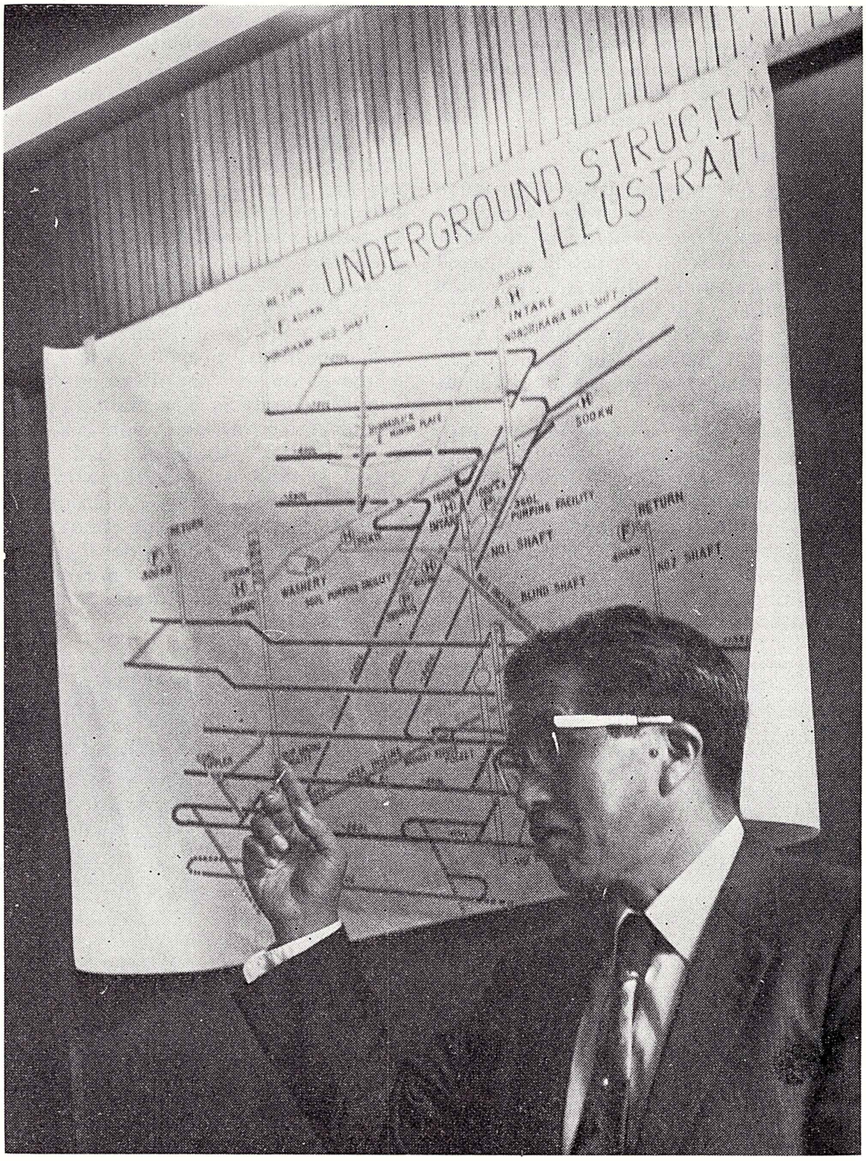
Canadian and United States mining companies have been interested in the great success of this operation and Mitsui has dispatched mining engineers to make a hydraulic mining project at Balmer coal mine, in British Columbia.

Inclined shaft driving at Mitsubishi Minami-Ohyubari Coal Mine was also described by Mr Adachi.

Centralised

"In a basic concept of promoting a new modernised mine, we have developed and introduced a central monitoring and control system," Mr Adachi said, in the section of his paper about the central control system in Japan.

"This is for general equipment and mine safety in order to increase operability and to secure safety



Mechanical mining in Japan was reviewed by Mr Rokuro Adachi, Senior Mining Engineer of the Japan Overseas Development Company.

Mr McKenzie's paper surveyed assurance by the prompt and organised treatment of various information necessary for operation."

Two technicians in a newly installed "controlling office" supervise:

(a) Prompt and precise collection of operational information and remote controlling.

(b) Unified, prompt and universified instruction and communication functions by inductive wireless telephony.

(c) Back-up for automated equipments at workings.

Operations of main underground and surface equipments are basically conducted by a system of remote control. A total of 600 points for controlling, monitoring and measuring have been reached in the system.

Measuring safety apparatus and central monitoring have been automated.

Opencast

"Opencast Mining Operations" were discussed in a paper by Mr N. M. McKenzie.

He traced the evolution of mechanised equipment for opencast excavating and the increasing demand for coal as industry developed.

"At the present time, coal production is now probably in the vicinity of the staggering total of 2500 million tons per annum," he said, reviewing the world's consumption of coal.

Specifically discussing opencast coal extraction, Mr McKenzie said that, unlike other minerals which are in lodes or reefs, coal is deposited in seams. It is largely overlaid by sedimentary soils and rocks in New Zealand, and these soils for the most part are readily removed by mechanical plant.

Mr McKenzie tabulated the advantages and disadvantages of opencast extraction:

Advantages:

1. Complete removal of all coal exposed with little or no loss.
2. No expense or danger as regards ventilation and consequently greatly improved health and safety.
3. Elimination of lighting (except if night shifts are worked).
4. Easier supervision and control of the operation.
5. The ability to lay out the work on a large scale and to expose and therefore make available quickly, large volumes of coal as a contingency.

Disadvantages:

1. Initial problem of disposing of large volumes of overburden.
2. The adverse effect that bad weather — rain, snow, frost and fog or mist — can have.
3. The problem of leaving the final worked out areas in an acceptable form

Mr E. Annan, a deputy at Mt William mine (left) enjoys a break in the sunshine at lunchtime discussing the morning's papers with Mr Iain McIntosh, a mining engineer from the head office of the Mines Department.

Mr McKenzie's paper surveyed types of mechanical equipment used in opencast coal extraction, and opencast coal mines in New Zealand with each one's particular history, problems and peculiarities.

"It is clear that coal is going to take a more prominent role as far as New Zealand's future fuel resources are concerned," Mr McKenzie said.

He discussed the problems in present and future development of opencast coal extraction, and concluded: "Regardless of today's economic gloom, the future outlook for mining development must remain bright. The world will need all the mineral resources that can be economically developed, and New Zealand is perhaps only beginning to make its contribution in this regard."

A paper "Some Practical Experiences with Hydro Mining on the West Coast", by Mr R. W. Scott will be reprinted in the next 'Coal' magazine in edited form.

ENCOURAGING

An encouraging sign of the times is the decision by Guildway Limited, Britain's foremost manufacturer of timber-framed houses, to incorporate solid fuel central heating in one of its factory-site show-houses at Guildford, Surrey.

— SFAS News.

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BEWARE OF GEESE GUARDS

Child vandals who have plagued Gardner's Coal Depot at Heap Bridge, Bury, England are no match for the firm's latest security system — two geese and a gander. The protective instinct of the gander is so strong that any intruders, seen as a rival for the affections of the geese, are put to flight in a flurry.

The gaggle guard was the idea of depot manager Chris Snape who got fed up with vandals continually damaging the property. He bought them from a local farm for £10.

— SFAS News.

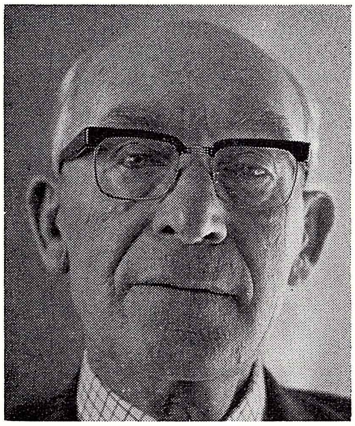
KING COAL MERCHANT

At the Northern Ireland Coal Advisory Service annual coal trade evening in Belfast, last year, a new departure was the election of a "Coal King" for the Province. Five finalists were quizzed in light-hearted fashion by one of Ulster's top comedians, Tom Raymond, for the benefit of an all-female judging panel. The unanimous winner was coal merchant Norman Patterson of Carrmoney, near Belfast.

— SFAS News.

DISTRICT NEWS

– HUNTLY –



Mr T. Glendinning, who retired on March 5 as Assistant District Manager of Mines, Huntly.

Changes in district managerial staff at Huntly will take place in March, when Mr T. Glendinning retires as Assistant District Manager, Huntly. Mr R. Duggan, District Manager, Westport was appointed in December to succeed Mr Glendinning.

Born in Washington, Durham, in England, Mr Glendinning began his career in coal with Grey Valley Collieries Ltd in January 1928. He moved to the North Island to work for Glen Afton Collieries in 1935, but returned to the Grey Valley to work at Liverpool State Coal Mine in 1938.

From 1940 until 1948 Mr Glendinning was successively deputy, underviewer and manager for the Westport Coal Company, and then returned to the North Island to become manager for Taupiri coal mines.

He managed Rotowaro Mine from 1950 until 1954, when he was transferred as manager of Strongman Mine at Greymouth, and then left the department in 1955 for a year to take private employment in Nelson.

Manager, Denniston, was his first appointment when he returned to coal mining in 1956 and in 1958 he was back managing Rotowaro. He became Inspector of Coal Mines at Greymouth in 1963, and at Huntly the following year.

Mr Glendinning was appointed Assistant District Manager, Huntly in 1973.

Mr Rex Duggan was born in Greymouth and educated at the Greymouth Technical High School. He joined the Mines Department at Dunollie in December, 1950, as a survey assistant.

After qualifying as a mines surveyor and being appointed in that position at Dunollie in 1957, he took leave without pay for a year in 1964 to obtain practical experience to qualify as a first-class coal mine manager.

Mr Duggan qualified as a manager in 1965 and the following year became manager of Stockton Mine. He became Acting Controller, Buller District in 1970 and was confirmed as District Manager, Ngakawau two years later.

– BULLER –

(Correspondent: Bill Miller)

The period has been one of the best for years, the weather being perfect over the Christmas holidays.

The Inangahua school visited the Stockton Area on November 27 and had a wonderful time. They were accompanied by the schoolmaster, Mr Fraser Campbell and two mother helpers, Mrs Jennifer Brooks and Mrs Ruth Inwood.

Office News: Mr Rex Duggan, our district manager, has been transferred to the North Island, and Mr Jack Lundon (district manager Greymouth) is looking after the area at present.

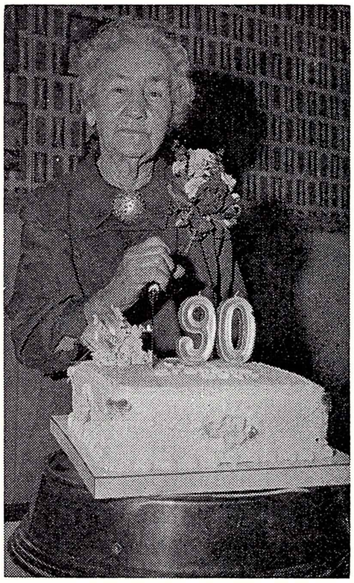
Mrs Val Collins (nee Tippen) has resigned from the Westport Office, and Mrs Baldy has transferred to Christchurch.

We hear that everything at Coaltown is going according to plan, and we can expect a surprise shortly.

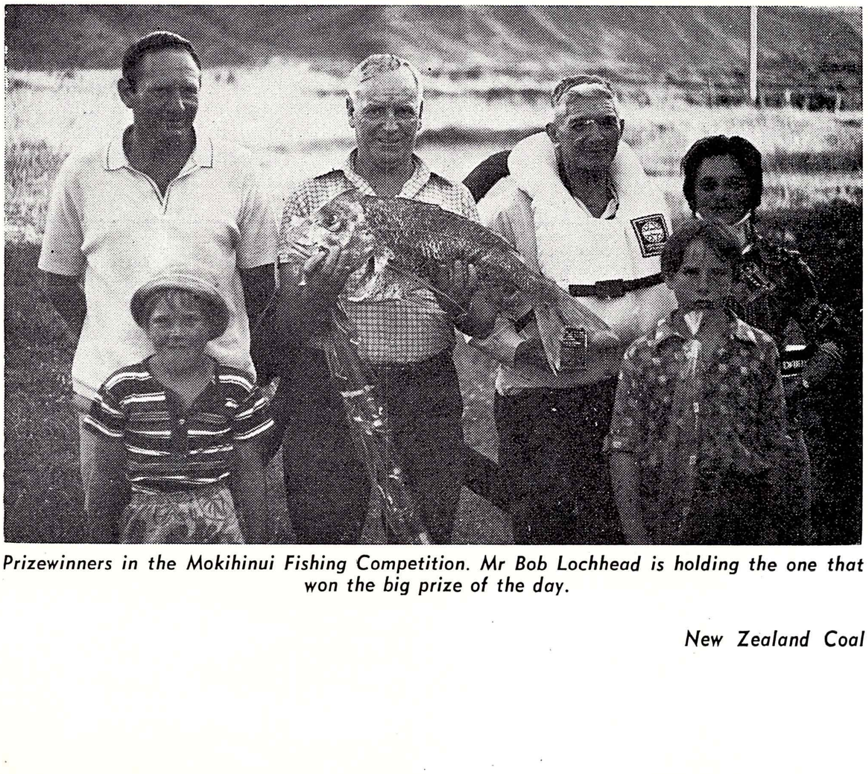
"The Coaltown Car Raffle" was won by Dave Grieg of Westport.

It is with regret and sorrow that I have to record the passing of the following old citizens:

Joe Blair, late of Ngakawau.
Mrs Jack Evans, late of Granity.
Mrs Joan Black, of Westport.
Mrs Leonie, of Hector.



Mrs A. Williams of Hector, who celebrated her 90th birthday with a family dinner at the Marine Hotel at Ngakawau.



Prizewinners in the Mokihinui Fishing Competition. Mr Bob Lochhead is holding the one that won the big prize of the day.

Birthday: Mrs A. Willman (senior) of Hector and formerly Seddonville, celebrated her 90th birthday on November 23. Her immediate family gave her a dinner at the Marine Tavern, Ngakawau, followed by an evening for the rest of the family.

Sport: With the wonderful weather we have had plus the daylight saving the summer sports have had a marvellous season.

Wedding: Frances Borlase to Jim Halligan.

FISHING COMPETITION

Caught with his pants down, Mr Bob Lochhead of Granity still managed to carry off the big prize of the day at the Mokihinui Fishing Competition. Fine weather and a good sea attracted a large entry of fishermen and women including a lot of holiday makers in the area.

In presenting the prizes, the chairman, Mr I. R. Morgan, thanked the entrants for their support, the donors DAIWA of Christchurch and the Buller Sports Depot for their generous prizes and added that the success of the competition had ensured that it would become an annual event.

Winners:

1st R. Lochhead — 11 lb snapper
2nd P. Snowden — 6 lb trevalli
3rd R. Austin — 5 lb kahawai

Ladie's Section:

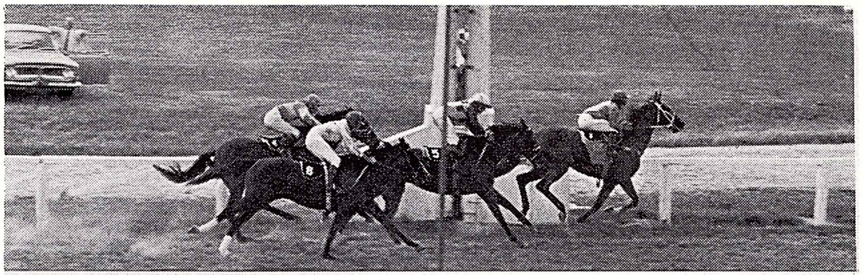
1st Tricia Mulholland — 2½ lb gurnard.

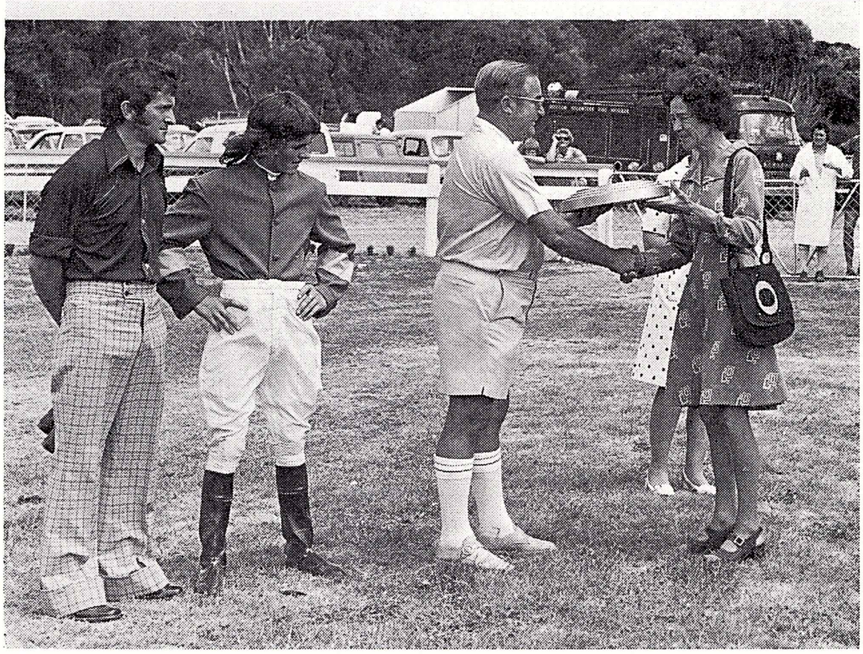
Children's Section:

1st equal Nichollas McMillan and Brent Smith. 2nd Lance Austin.

The senior winner, Mr Bob Lochhead, donated his fish to the organisers to be auctioned, and this raised $12 for the River Protection Scheme, Jim Chandler being the highest bidder.

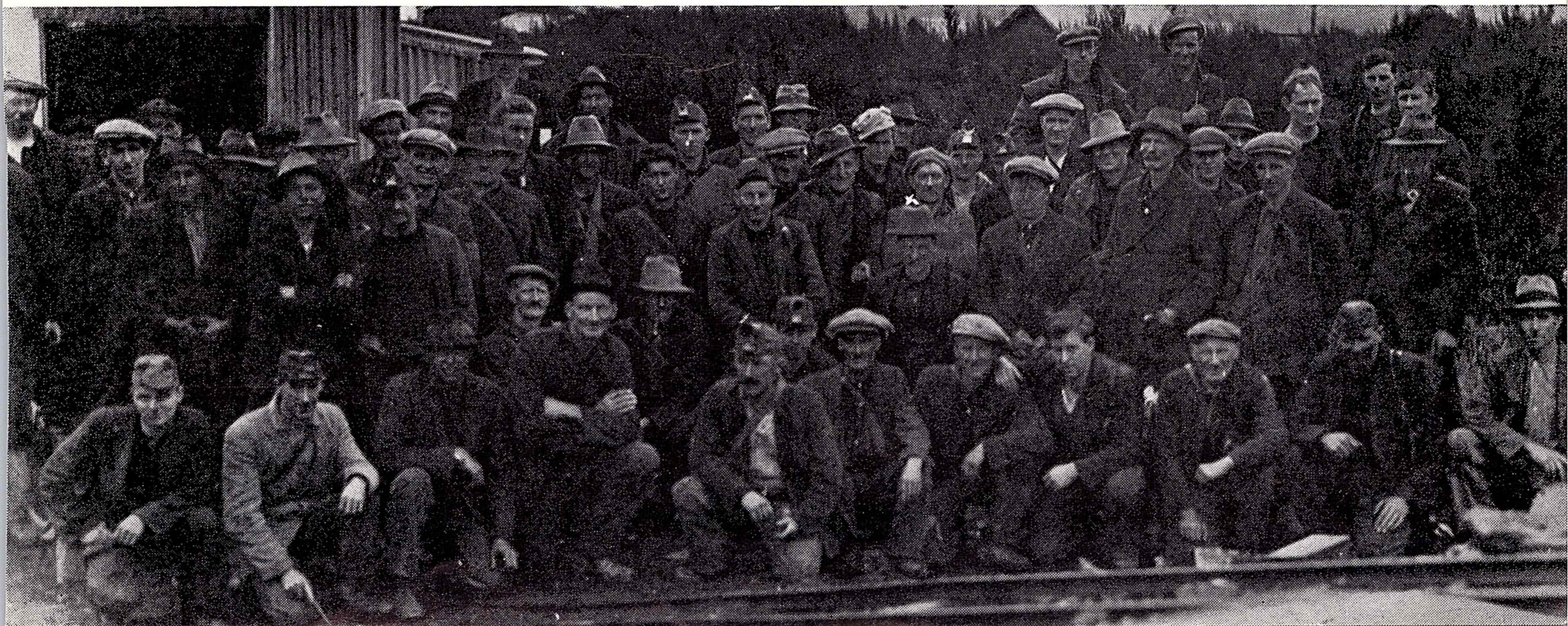
Perhaps the biggest hard luck story of the day went to Bluey Duffy who all but had the winning fish in the frying pan when an urgent call went out requiring it for the photos and the presentation.





Coal inspired Audaciter notches up a clear win in the Reefton Handicap at the coal mining town of Reefton on January 8. Mr A. L. Ling, Christchurch, owner of Audaciter, received an $80 trophy donated by Thos Brown Ltd, the coal merchant company with interests in Reefton mining. Mrs A. B. Hallaran presented the trophy while trainer Kevin Quayle and winning jockey Leo Molloy looked on.

When Mr Tom McMillan, manager of the privately owned coal mine Mossbank Coal Company, left his job about 1933 the miners assembled to present him with an inscribed pocket watch and to be photographed with him. Mr McMillan is in the centre of the group (white cross above his hat). Later, he became an inspector in the Glenorchy, Central Otago, district and when the miners saw him striding up the hill to a claim or mine the billy was put on to boil and there was a mug of strong billy tea available as the first item of inspectorate business. Two of Mr McMillan's sons are in the photo. Mr Ted McMillan (first left in front row) was manager of the Lockington Mine at Kaitangata when it closed in 1970. He managed Linton State Coal Mine at Ohai after Lockington closed and retired to live in Kaitangata. The photo was sent to "Coal" by Mr W. Elliott, an underviewer at Linton Mine, Ohai, whose father is in about the middle of the front row sporting a heavy moustache and an acetylene lamp in his canvas hat. Some of the younger men in the photograph are still coal miners, others are retired but the greater number have since died.



SS LAWRENCE

On April 18, 1891 the steamer Lawrence grounded at the mouth of the Mokihinui River while attempting to cross at half tide. She was loaded with coal.

She was refloated but having lost her propeller blades the ship foundered on the south side of the river mouth and the heavy seas the following day broke her up completely.

Afterwards, Mr D. P. Mumm (grandfather of Mr W. Mumm, at present a Buller County Councillor) salvaged a small boiler which he used at a sawmill at Seddonville. Mr D. P. Mumm had been a mate in the Lawrence. During 1946 some locals recovered an anchor which was used for some time on a dragline. Recently another large anchor was recovered from the wreck and will form the centre piece of a patio at the Kynnersley Tavern at Mokihinui.

Considering its lengthy immersion in salt water, the anchor is in remarkably good condition. With renewed interest in the wreck, it is thought the dragline anchor will be also restored for display.

Another local family has a photo of the ship and a plate which was embossed with the ship's crest. For many years the remains of the ship have been visible during very low tides and it is a noted spot for larger mussels.

Originally called the Bortonius the Lawrence was launched in Sunderland in 1884.

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DOC SEES SON'S HOPES SINKING

Send for "Doctor" Hall — that was the emergency call from Cardiff's National Stadium when Wales Rugby international centre Ian Hall was carried off with a broken leg in the unofficial Test against New Zealand.

And along came his father, Coedely Colliery medical attendant Bill Hall, 57, to treat the most critical case of his first-aid career.

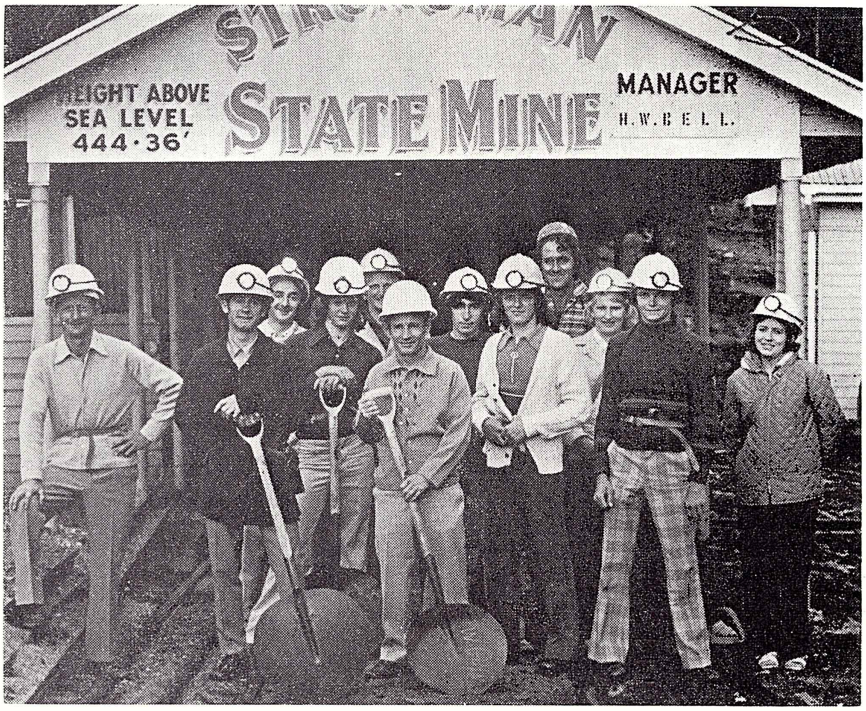
As 28-year-old, 13-stone-four Aberavon strong man Ian was lifted on to the stretcher, medico Dad confirmed the worst fears of Welsh team physiotherapist Gerry Lewis.

Says "Doc" Hall: "I've had a lifetime of treating injuries but this is the worst break I have ever known, and all the more serious because the ankle bones are also dislocated. It's the type of injury all sportsmen dread — I doubt if my boy will ever play first-class rugby again."

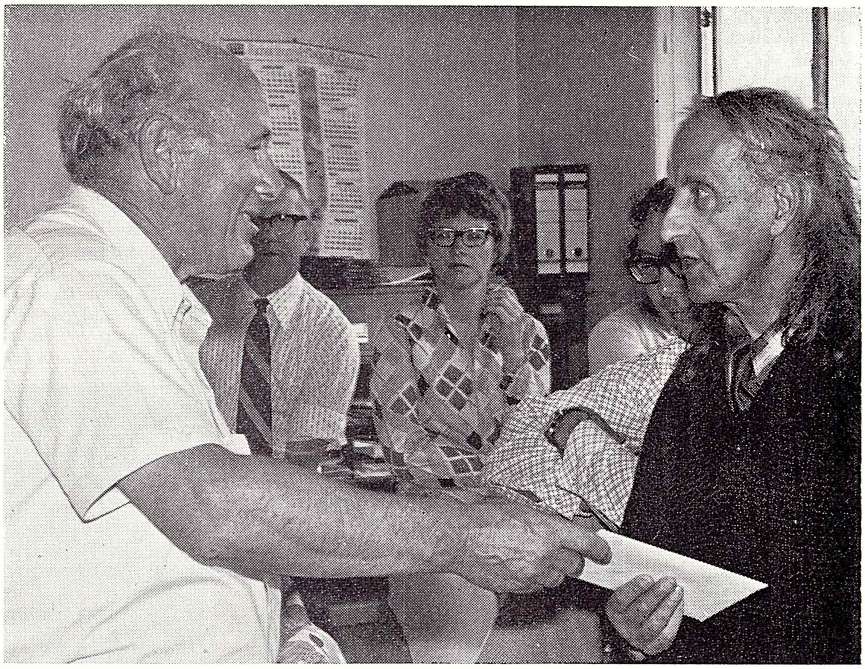
ADVISES

It was AGONY for Pop. He had seen his son win back his Welsh team place last season to bring his tally of caps to eight, and looked set for another run of big match appearances. Then came the accident in the 42nd minute — the unluckiest break for a family steeped in medical history.

— British "Coal News"



Hands more used to gripping reins tried a grip on the banjos when some of the jockeys riding in the Greymouth Jockey Club's meeting on December 3, and two of their wives, visited Strongman Mine the day before the meet. Outside the Strongman starting gate, left to right, were: G. R. Edge, D. A. Peake, M. J. Lawson, D. G. Holden, A. K. Robsinson, W. D. Skelton, L. J. Molloy, R. Hambley, Mrs Robinson, P. D. Johnson and Mrs Lawson. History has not recorded whether the miners made a killing on the tote as the result of any hot tips at the coal face, or whether coal fired the reinsmen to better times after the meeting of coal and sport-of-kings' men.



After 28 years in the head office of Mines Department, Mr Joe Le Poidevin retired in January as the staff member with the longest continuous service in Head Office. "I've been talking for 28 years and I haven't much to say," he said when Mr I. D. Dick made him a presentation on behalf of the staff. "I've enjoyed it most of the time, working here." Originally from Guernsey in the Channel Isles, Mr Le Poidevin worked in the records section. He has established a reputation for his stamp collection, and has travelled within New Zealand and Australia to lecture on philately.

Too YOUNG Too OLD

Mr Matt Robinson, who spent over 60 years in the coal industry.

Mr Matt Robinson of Huntly tells a sad story: "Sacked from a coal mine for being too young and sacked from a mine for being too old."

In between, this active 84-year-old ex-miner has packed in over 60 years of work in the coal industry.

Born on "The Hill" at Denniston on St George's Day, 1890, Mr Robinson came from a family associated with coal: his father was the blacksmith at the mine.

"A man came to my father one day and asked him to show him how to sharpen picks and shovels," Mr Robinson says. "Dad taught the fellow how to do it, and then he went off to the manager and offered to do my father's job at one shilling a day less!"

Mr Robinson's mother had to take in washing to help keep her family in the face of setbacks such as this, and later ran a boarding house at Millerton. The man who had usurped the job came unstuck when later tasks showed his ignorance of the blacksmithing craft. Matt Robinson's father was reinstated. Even so, the man who had stolen his job was sufficiently brazen to ask the blacksmith for instruction in the more complicated work.

Mechanisation

Even at the beginning of the century mechanisation was beginning to appear on the coal-mining horizon. A machine nick-named "Mary Ann the Iron Man" was tried out at Denniston. Introduced to cut coal mechanically, the Iron Man was unsuccessful, mainly because the state of the art in metallurgy could not cope with mining conditions as they were then.

Mr Robinson missed school to take a job greasing the skips at Denniston but being only 13 years old he was sacked when the school committee questioned the mine manager about employing someone so young. Later, however, he was to return to the coal mining and make it his life's work.

The Robinson family moved to Auckland for a short time and in the North Island Matt Robinson had a job for a while, driving a horse to dump slack in a lake, the present site of the Davies Park League grounds. At Huntly he worked in the Extended mine until sacked in the 1913 strike.

After no work for three or four months, he went to Waipa when the Glen Massey Mine opened and contracted to build some huts at £69/10/- each. He worked in the mine until 1917 or 1918, and then went to Nicolson's Mine at Huntly.

"Wooden rails with iron straps," he recalls of the Nicolson Mine at that period of his life.

Pukemiro Mine had him on its payroll for six months and then he joined Rotowaro Mine when it opened about 1919.

When the Renown Mine began he worked there and stayed on until 78 years old.

Sociable

"It tones your muscles up!" Mr Robinson says of coal mining. "As a rule the miner is sociable — I've had many good mates."

Hardships were the order of the day in Mr Robinson's time. For the loss of sight in one eye, caused by a flying chip of stone, he received only £90.

It was hard manual work with the pick and the hand borer and the miners paid for their own explosives. A miner earned 27 or 30 pence a ton for the coal he hewed and worked an eight-hour day. Depending on orders for coal, there might not be work every day.

In retirement at Huntly, Mr Robinson still keeps an interest in Red Factor canaries, a bird he used to breed. At one stage he had 150 of them.

Another interest is a garden full of interesting trees and plants: oranges, mandarins, lemons, an avocado pear, custard plant, a salad plant, pawpaws, a lantern tree — to mention only some.

Always he is ready to recall the 60-odd years he spent with coal — with the thought: "It's a long way better now than it was in those days!"

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SIBERIA FINDS NEW COAL

The discovery of rich coalfields in the Irkutsk region of Siberia has come just at the right time, writes Yury Kanin in "Soviet News".

The huge hydro-electric station on the River Angara, which now produces 22,500 million units a year, turned the little river port of Bratsk into a great industrial centre.

To provide ample electricity, heat and central hot water alone it will need a fuelled power station consuming over a million tons of solid fuel a year . . . but the nearest existing coalmines are 600-750 miles away.

Now a rich seam has been discovered almost under Ust-Ilim and a still larger coalfield a mere 25 miles away.

This can be cheaply opencast-mined, and the coal is of better quality than that brought in.

The discovery was not, in fact, luck. Experts suspected the gigantic Tungus coalfield had fingers stretching south — and so it proved.

The deposits are believed to be good for three million tons a year.

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RUSSIAN JOURNEY

A visit to a Russian coal mine is described by Mr F. W. Munden of the Mines Department. Late last year Mr Munden toured the U.S.A., Britain, Germany, U.S.S.R. and Japan in the course of a nine weeks' visit arranged by the Department to gain more experience of mechanised coal mining.

Donetsk

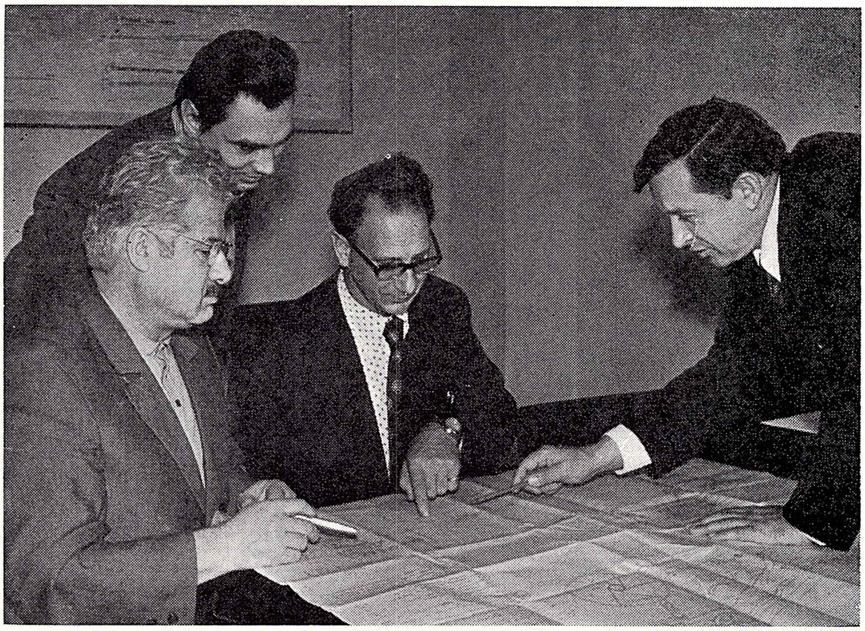
Situated on the steppes of the eastern Ukraine some 540 miles south of Moscow and about 60 miles north of the Sea of Azov, this modern city of Donetsk of about one million inhabitants was devastated during World War II and subsequently rebuilt.

It is the major centre of the vast Dombas coal field, which is said to have at least 50,200 million tons of measured reserves of anthracite and bituminous coal.

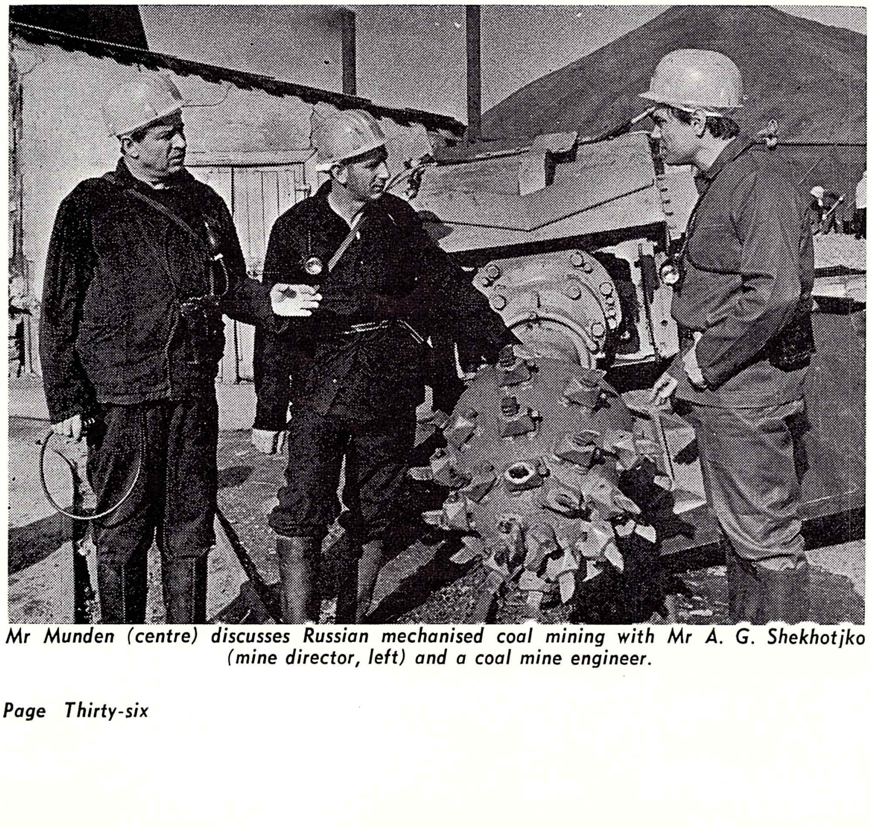
Donetsk also serves heavy industries associated with the coal industry and the boundless agricultural areas surrounding it.

Spacious and modern, it identifies with the coal industry in many ways. It is a centre for the manufacture of mining machinery, and has mining research laboratories and technical institutes associated with the coal industry.

Pit tops dot the landscape and intrude into the city. A huge statue of a miner, back-dropped by pit tops, dominates a city square.



In conference in Russia: Sitting, left to right, Messrs I. V. Kevenadze (vice chief engineer, Bulovskaya Mine), F. W. Munden (N.Z. State Coal) and A. G. Shekhotjko (Director of the Mine, Bulovskaya). Standing, Mr V. S. Efrimov (Chief of Foreign Relations, Ministry of the Ukraine Coal Industry).



Mr Munden (centre) discusses Russian mechanised coal mining with Mr A. G. Shekhotjko (mine director, left) and a coal mine engineer.

The 12 storey hotel I stayed at was "Hotel Shakter" (Miner).

The Coal Seams:

The average working depth of collieries is about 1000 ft but new mines are now probing to a depth of over 3000 ft.

The seams are flat or gently dipping. Fifty-five per cent of them are less than 30in. thick and the rest do not exceed 11ft 6in.

Forty per cent of the coal is classed as gassy and 34 per cent super gassy, often subject to dangerous outbursts of gas.

In common with other European countries the coal is primarily won by "Longwall" methods.

Butovskaya Colliery:

The Director, Mr A. G. Sekotjoko, and his officers at Butovskaya Colliery went to great pains to brief me and extended every assistance and their whole hearted hospitality. Butovskaya is one of the old collieries and began producing in 1928. It has been reconstructed more than once.

RUSSIAN JOURNEY

(continued from page 36)

At the time of my visit it was producing 3300 TPD (tonnes per day) with a total work-force of 2500. Twenty-five per cent of the work force is engaged in maintenance work but, with the present reconstruction programme to develop the deeper seams and to rationalise coal transport and other systems, the mine will be producing 7000 TPD by 1977.

The seams being worked vary from 4ft 3in and 6ft 7in depending on the particular seam. The ash content of the coal is about 10 per cent.

P.K.7 Road Header:

The main reason for my visiting this colliery was to see the smaller version of the P.K. series of road heading machines.

The P.K.7 is a simply constructed machine, 4ft 1in wide, about 18ft long, weighs 10 tonnes and can cut to a height of 9ft 4in.

It will operate on grades plus or minus 15 degrees (1 in 3.73) and is equipped with a dust suppression system which includes water sprays as well as a fan unit to exhaust and filter dusty air.

Producing up to one tonne per minute with a 30 hp 380V 50 Hz FLP cutter head motor, this and similar machines can be used in narrow roadways.

The machine inspected at Butovskaya was developing in 5ft 11in of gassy coal. It had driven up to 5900ft of roadway in a month, taking 70 per cent coal and 30 per cent stone, working on a round-the-clock basis for four overlapping shifts per day for six days per week. Production time was 20 hours out of 24.

The Working Face:

The machine alternately produced coal and stone. The coal was soft and very gassy.

While the machine was operating coal continually burst and splintered from the face with considerable noise and dust.

Auxiliary fans and machine suppression units were used to reduce the dust concentration.

In common with other road heading operations seen in Europe, this machine was developing a single entry to form a block of coal for a longwall retreating face.

Safety:

Safety precautions in the mine were impressive. Seldom have I seen roadways so heavily stone dusted. Close to the cutter head of the P.K.7 was an audio-visual automatic methane detector which "beeped" and flashed a red light should the methane content in the air exceed 2 per cent.

In addition another monitor in the shape of a cube about 10in square continually monitored the methane content of the air and relayed it via cables to the mine control room on the surface. It also had the facility to cut off the power on the machine should the methane content exceed permissible levels.

During my visit a sudden outburst of gas from the face actuated both monitors. The power to the machine went off and the audiovisual monitor continued to beep and its red light to flash. The team leader also had an interferometer methane detector which gave a scale reading of the methane percentage in the air.

This machine operates on the principle that a beam of light is bent when passing through air containing methane in proportion to the amount of methane present.

The Production Team:

The team, including the leader, who seems to double as a deputy, consists of five men. They work on an incentive scheme based on a daily wage rate plus a bonus paid on distance driven.

The team spirit is well developed; they are very deliberate in their actions, they know their job well and need little if any instruction in carrying out their jobs. Based on standards observed in other parts of the world, working conditions were good and the mine neat and tidy.

Long Wall Face:

The machinery and equipment used for longwall retreat mining is pretty much the same type in Russia as in Britain, Germany and Japan.

At Butovskaya the faces are equipped with double legged advancing supports capable of withstanding 40 tonnes. They are used in conjunction with a snaking armoured face conveyor (AFC) on which runs the drum shearer for cutting and loading the coal on to the AFC.

Chain conveyors are used to carry the coal from the AFC delivery to the main belt.

A hydraulic power pack using a water emulsion at 150 atmospheres is situated back from the face in the intake road. This unit supplies the hydraulics for the support system and other equipment.

Fluorescent lights are widely used along working faces. High levels of illumination are an essential adjunct in mechanised mining.

Pit Top Facilities:

Pit top facilities were substantial and well constructed.

A feature is the large assembly hall where the work force assembles before going on shift. Complete with a stage and murals, the hall has a series of briefing rooms along the sides where shift bosses and team leaders meet to receive and pass on instructions for the various sections of the mine.

Lamp cabins and layout are much the same the world over. The major differences are probably the presence of women attendants. They add the little touch, the greenery, the bird in the cage.

WARMAIRE INDUSTRIES' SOLID FUEL SPACE HEATER

One of New Zealand's most experienced heating manufacturing companies Warmaire Industries Ltd has recognised the increasing importance of solid fuels as a domestic heating energy.

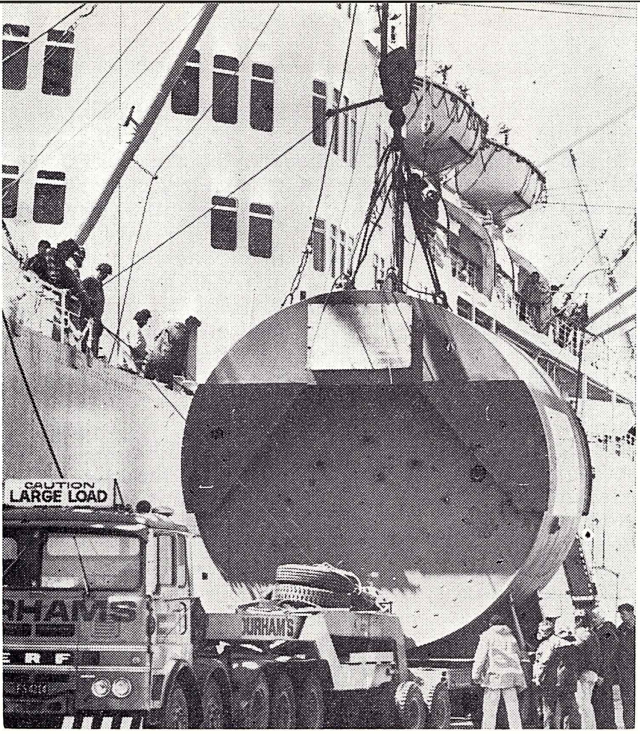
They are introducing to the market this year a slow combustion free standing space heater. Designed to burn either wood or coal with equal efficiency the heater has been developed with domestic and light commercial use in mind. Warmaire Industries was previously a division of Speedway Products Limited which had many years' experience in manufacturing slow combustion solid fuel appliances and much of this expertise has been carried on into the new heater.

The heater which has been initially tested to a maximum capacity of 35,000 BTUs with an efficiency of 72 per cent has a pleasing modern appearance. As a top outlet flue unit only (at this stage) installation costs will be at a minimum and an optional stainless steel flue kitset is available. Based on the principle of completely controlled combustion, the rate of burning can be varied by the working of a bottom air-inlet, and the wide glass doors give an unimpeded view of the firebox at all times. Further features are a two-day capacity ashpan, and an excellent wetback, water heating facility.

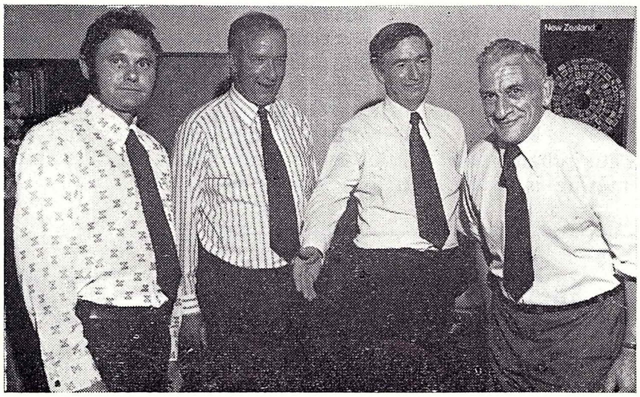
The heater should be installed on a concrete hearth and, because of its large capacity, central location in the home is advisable.

Commonly used spare parts such as grates and glasses will be readily available, and first production should reach the field in April.

ROUND and ABOUT with COAL

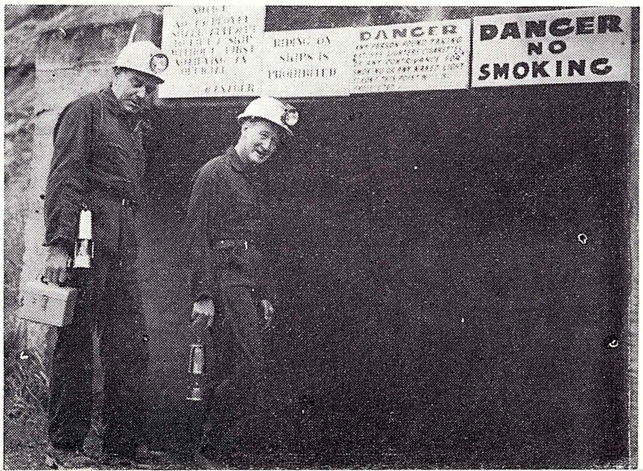


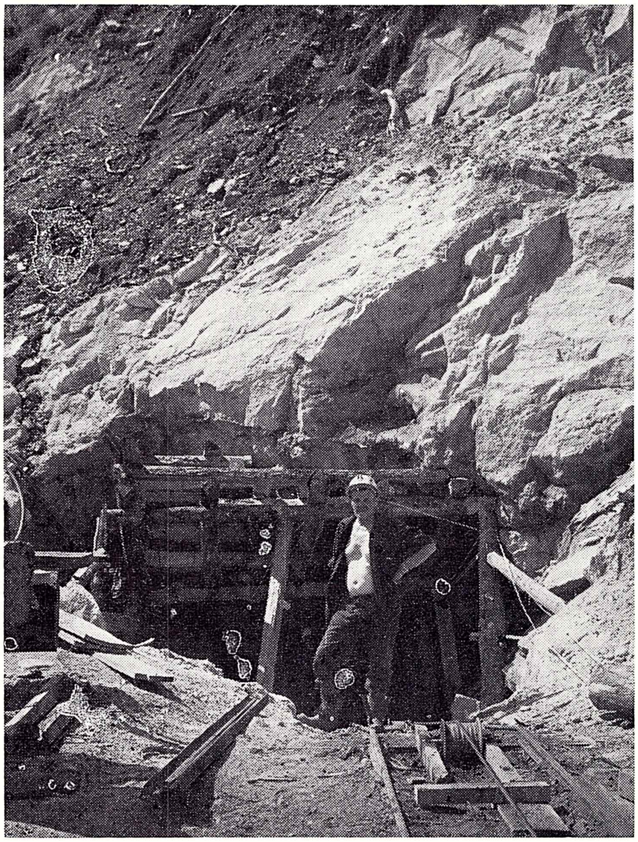
The 60-ton Babcock and Wilcox coal-fired shell boiler, destined for the Alliance Freezing Company at Invercargill, touches down in the South Island after its voyage from Auckland. The boiler arrived at the Bluff on November 11, in the Port Auckland and was unloaded by ships gear the same day. From the Bluff it travelled to the freezing works on a transporter with 52 wheels and 13 axles, owned by a Christchurch firm.



M. Bassick D. Brown Hon. Fraser Colman H. Pattinson
Representatives of United Mineworkers attended the Minister of Mines in his office at Parliament at the end of January to discuss new developments in coal production. Mr D. Brown represented the Mines Department.

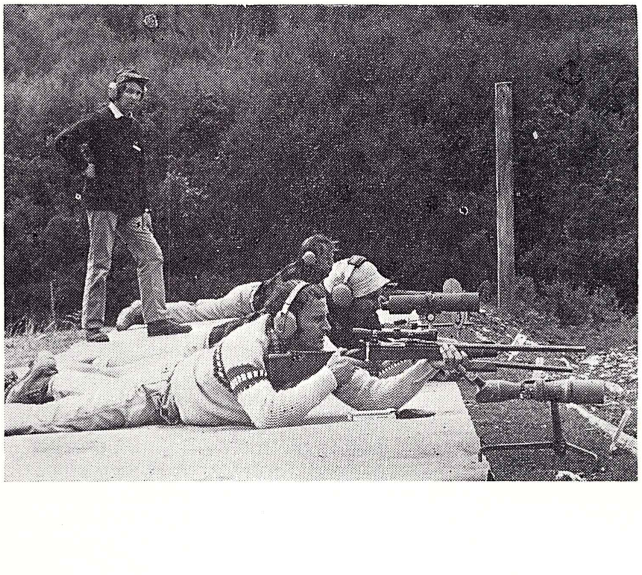
Safety for coal miners comes from continual vigilance: Mr R. A. Andrews (left), Inspector of Coal Mines at Huntly, prepares to inspect Rotowaro Mine in company with Mr E. Patterson, the manager. The coal mines inspectorate has evolved over a century as legislation in New Zealand has developed to safeguard the coal miners and protect them from hazard. Regular visits to all coal mines by the inspectors ensure that no manager can try and "cut corners" to keep production up at the expense of safety.

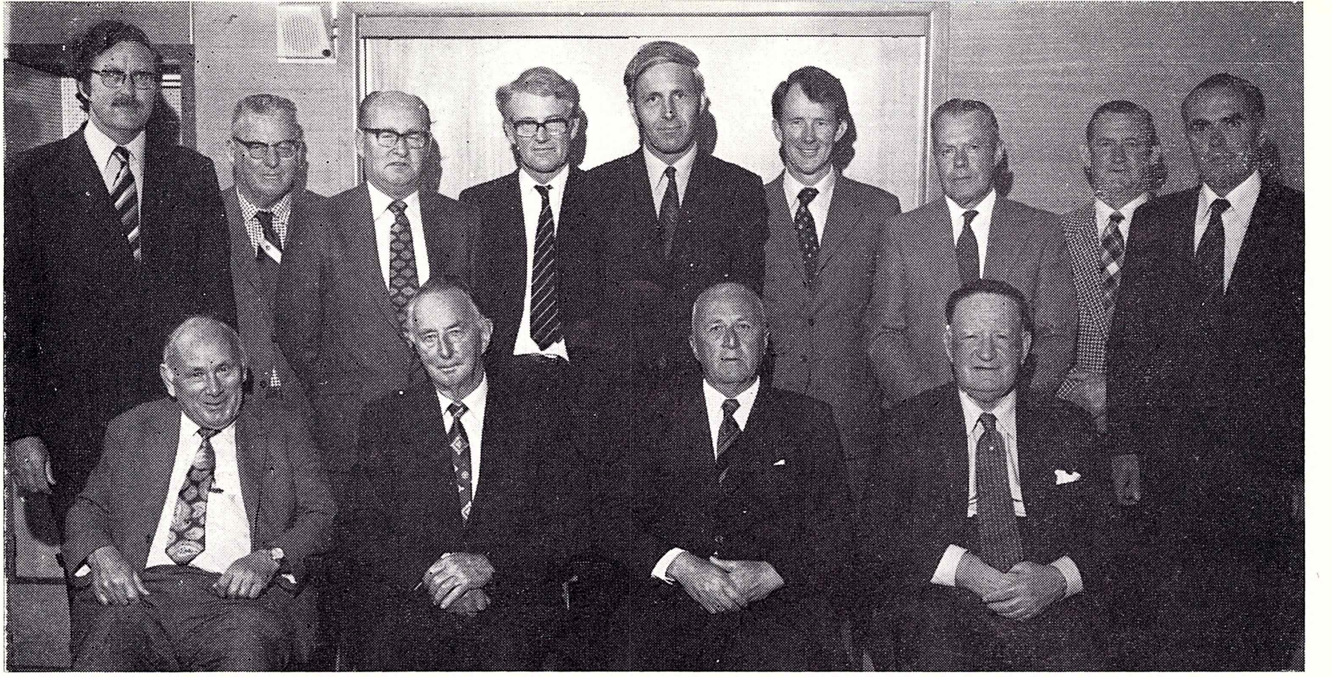

RIDING ON SKIPS IS PROHIBITED
DANGER
DANGER
NO
SMOKING



Mr Bert Robertson, a deputy at Waiuta Mine at Reefton, poses for "Coal" outside the recently reopened mine.

The deputy draws a bead: Mike O'Connell (foreground), deputy at Strongman Mine and a keen hunter and shooter when away from coal, sights on the target at the annual South Island Deerstalkers' Association shoot. The shoot was held in Greymouth in November and Mike O'Connell was one of the team representing the West Coast.





With 1974 nearly behind them, members and officers of the executive of the Coal Research Association look forward to coal's future for 1975. Photographed at the executive meeting in December, the members and officers are (with organisations or office bracketed): sitting (left to right), Messrs I. D. Dick (Secretary of Mines); R. S. Bates, deputy chairman (North Island private coal mine operators); G. Brunt, chairman (Coal Merchants Federation); and the late A. V. Prendiville (United Mineworkers). Standing (left to right): Messrs K. Haywood (secretary); E. M. Horan (Tourist and Publicity Department); S. Armstrong (Federated Coal Merchants, South Island); Dr D. Kerr (for Director-General, DSIR); Dr A. J. Ellis (for Minister of Science); J. M. Jeromson (Coal Merchants' Federation); E. H. Lange (Federated Coal Merchants); L. D. O'Connor (executive officer) and P. A. Toynbee (director). Absent: Messrs W. S. Partel (N.Z. Institute of Mining); R. J. Highsted (South Island private coal mine operators) and Dr J. Stott (for Minister of Science).

How a well-dressed bachelor coal miner dressed for a ball in 1911: this photograph from the past shows the State Collieries Bachelors' Ball Committee at Greymouth. The bachelors are: back row, left to right; Messrs C. Pinn, I. Steele, J. Guthardt and H. Lawrence. Middle row: Messrs J. Roberts, J. McGuiness, T. Collins, J. Southward, W. Robson and J. Dalzell (treasurer). Front row: T. Boardman, C. Isaacson, E. McGuiness (president), M. Comerford (secretary) and J. Kyle. Alexander Turnbull Library.

NEW WORLD RECORD

Scottish pitmen are claiming a new world record after producing 25,260 tons from one face in five days.

Miners in Solsgirth mine's 03 section in the Longannet complex beat the previous British record of 22,340 tons set by North Yorkshire's Kellingley Colliery.

— British "Coal News"

☆ ☆ ☆

RESCUE BLEEPS

In Britain, Kents' pit rescuemen will be "tuned in" to bleeps this year . . . to speed-up the service's call-out system.

Pocket-size pagers which pick-up electronic signals — similar to systems used by hospital doctors — are to be issued to all 41 members of the coalfield's six rescue brigades.

So that whether they are busy shopping or out for a stroll they'll know they have to report to their colliery as soon as they hear the bleeps from their pocket.

— British "Coal News"

☆ ☆ ☆

NEW BUILDING MATERIAL

Easy-to-handle building blocks made of colliery slurry and cement may soon be used for roof support packs — thanks to one of the National Coal Board's research projects.

Pitmen at South Wales' Deep Duffryn Colliery pioneered trials of home-made blocks using filter cake from the pit's washery, and found they were a good substitute for timber and commercially-made concrete blocks normally used to take comprehensive loads.

— British "Coal News"

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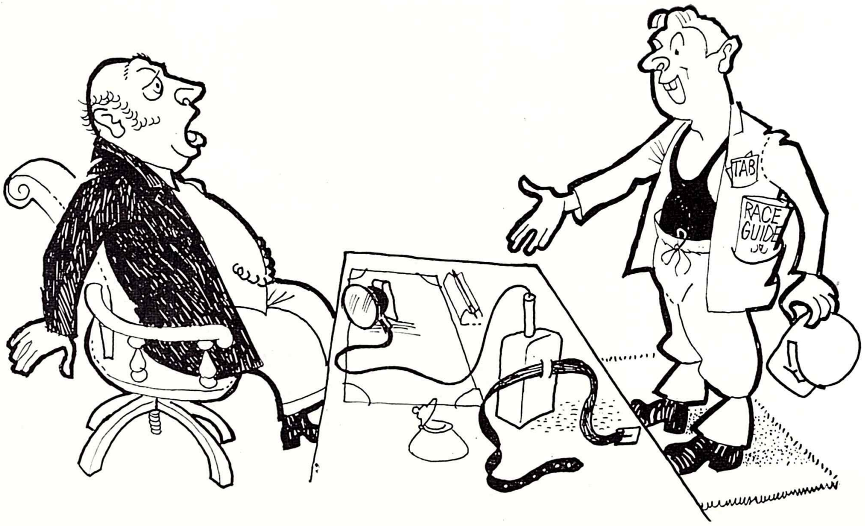

LEFT BEHIND?

A certain State coal mine manager (who shall be nameless, as he is actively employed in the coal industry today) has no hesitation — when pressed — in telling a story against himself.

As manager of a coal mine on the West Coast, he instituted a rule to try and combat absenteeism in the mine. He ordered that any miner who was absent without permission for more than two days was to have his lamp taken to the manager's office. When an offending miner returned to work, he had to stand on the manager's mat — with all that that implied — to take his medicine and get his lamp back.

One miner — a normally steady man — took a week off during Cup week in Christchurch, and following the system, his lamp found its way to the manager's office.

On the Monday, when he resumed work, the miner wound up in the manager's office, where the following conversation took place:

Manager: "I'm surprised to see you here, D———. This rule isn't aimed at chaps like you, but since you were away, I have to follow it up. "Now, why were you away?"
Miner: "I was over at Christchurch for the Cup week."
Manager: "Then why didn't you ask me?"
Miner: "How the hell did I know you wanted to go?"

Which left nothing more to be said really?

New gravity–feed commercial heaters

A new range of coal fired commercial free standing or ducted heaters are being produced by Carnahan-Andersen Ltd, Takapuna, to be marketed under their Jetstream trademark. Aimed initially at the glasshouse and poultry shed industries, they should also benefit factories and small schools. The heaters are respectively 200,000 and 400,000 BTU and feature the C.R.A. gravity feed system using pea coal. The fuel feeds from a hopper down an air-cooled tube on to an air-cooled cone which introduces primary air into the coal bed and a secondary air manifold above completes the combustion. A simple photocell control and a blower operating on thermostat provide automatic high-low control, with a combination limit controlling the circulating fan cycling and fuel shut-off in the event of fan failure. Tests by C.R.A. Auckland office give an average maximum efficiency of 77% on Rotowaro peas at 11.6 kg per hour. A 200,000 BTU model was operating at the N.Z. Building and Construction fieldays at Hamilton recently, attracting favourable comment on its tidy appearance and lack of smoke on high fire — typical of modern coal combustion, efficiency and cleanliness.

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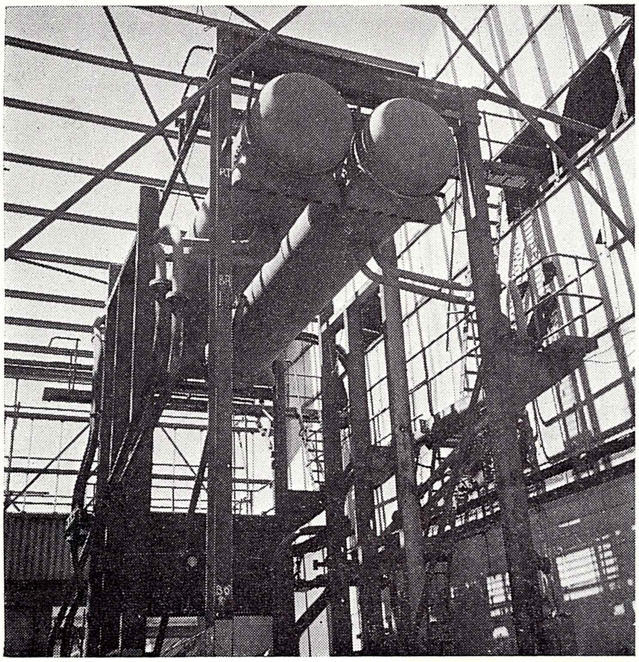
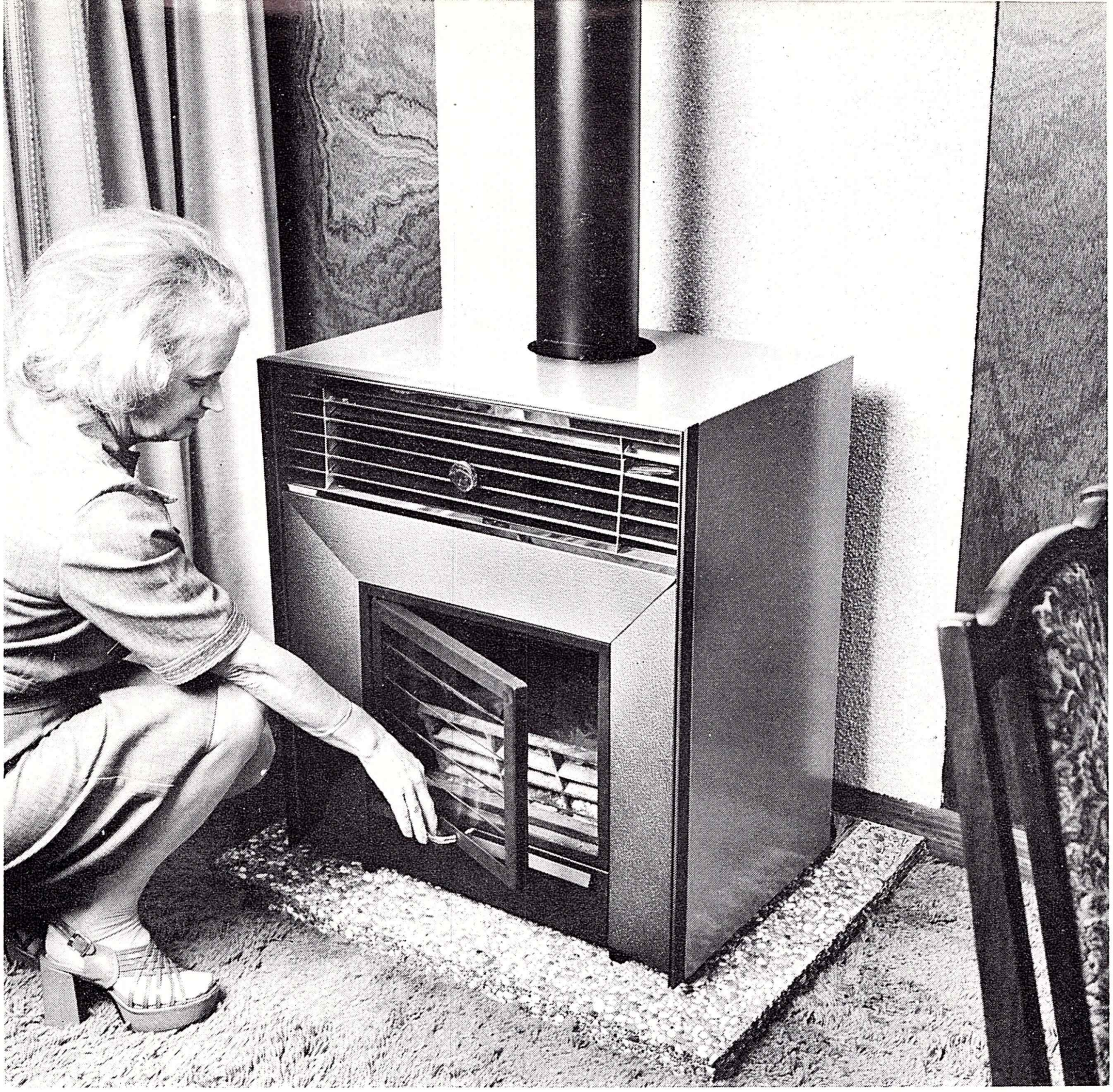
ADDED BOILER



Skellerup Industries Ltd, Christchurch, add to their boiler capacity with a 17,000lb per hour B. and W. watertube boiler ex Davis Gelatine. Other boilers at Skellerup are a 13,000lb and two 7000lb B. and W. Skellerup make a variety of rubber goods for the home market and export. The coal used is Alpine, Snowline, washed Strongman, United, Coalgate and Pacific blend.



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- Lights easily with paper and kindling.
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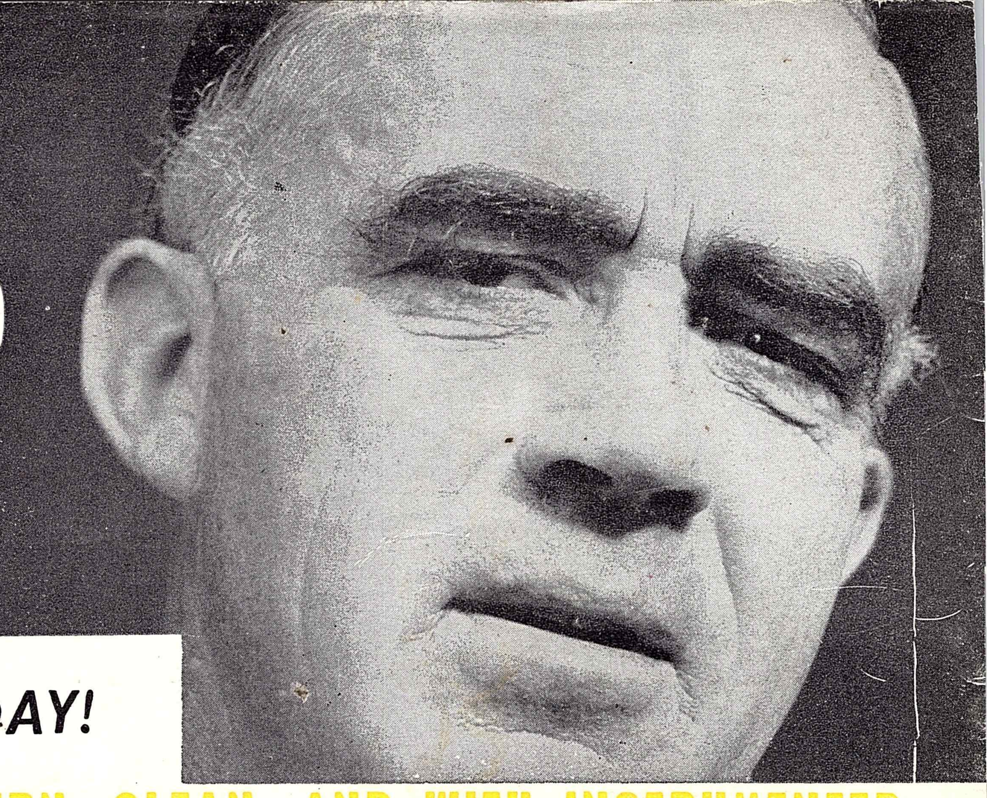

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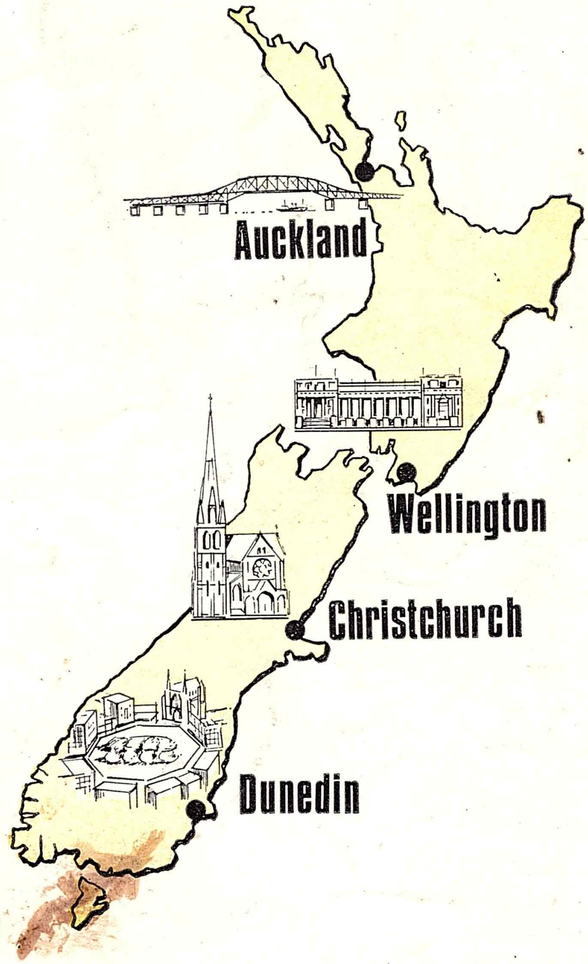

The fully qualified Fuel Technologists of the coal industry in New Zealand are readily available to Architects and Consulting Engineers planning for new or additional boiler plant. Their services are free and they will travel when necessary to any part of New Zealand for on-the-spot inspections. When you wish to obtain complete and up-to-the-minute information on the latest technological advances in coal burning, firing and storage, simply phone or write to your nearest coal industry Fuel Technologist.

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